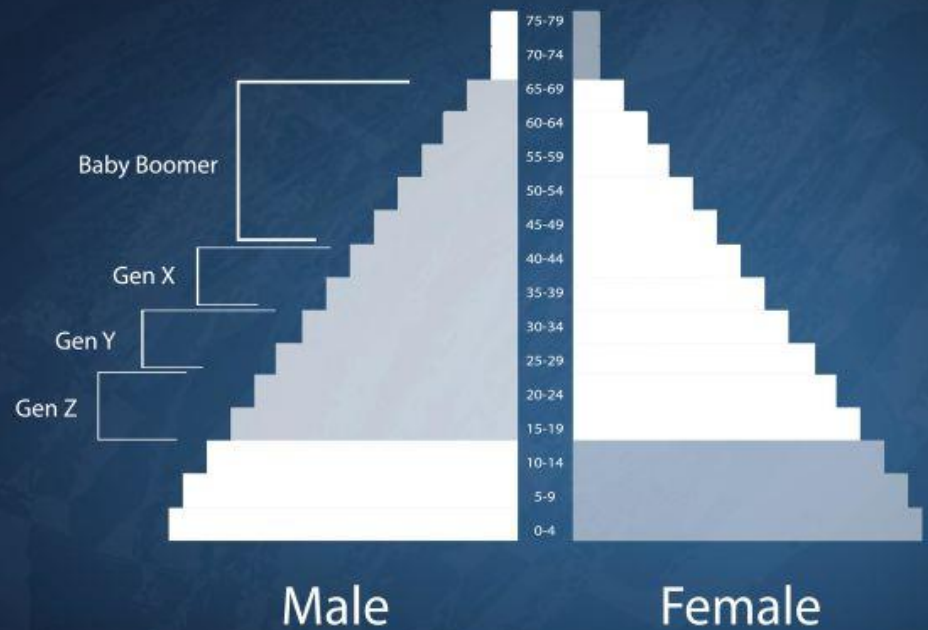


Taking care of the older adults

Ganesh Gopalakrishna M.D., M.H.A.

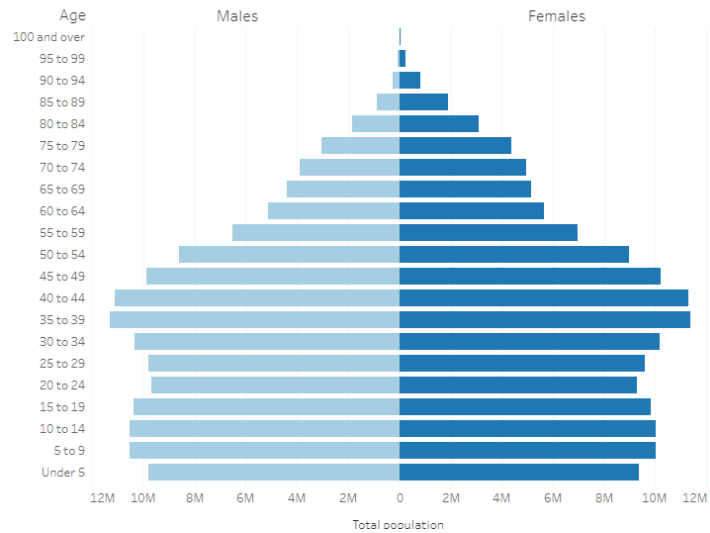
Case of the classical population pyramid



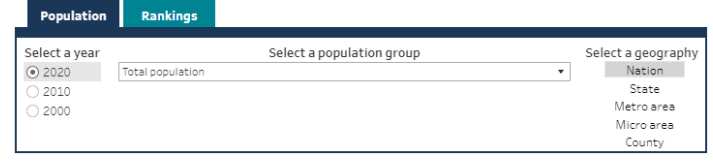
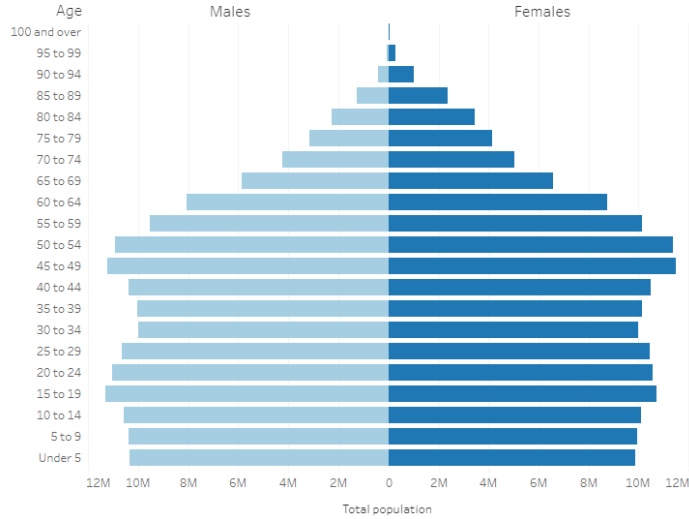
Population pyramid trends in US



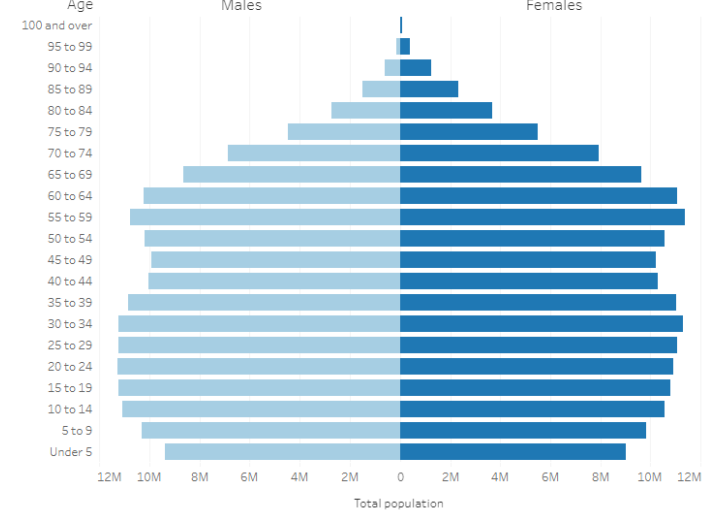
Population: 281,421,906
 Median age: 35.3
 % under 18 years: 25.7
 % 65 years and over: 12.4
 % female: 50.9



Population: 308,745,538
 Median age: 37.2
 % under 18 years: 24.0
 % 65 years and over: 13.0
 % female: 50.8



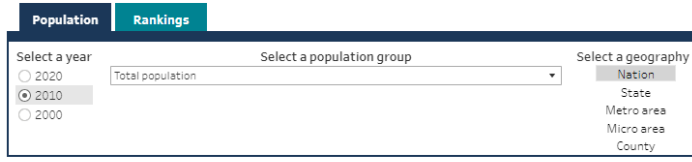
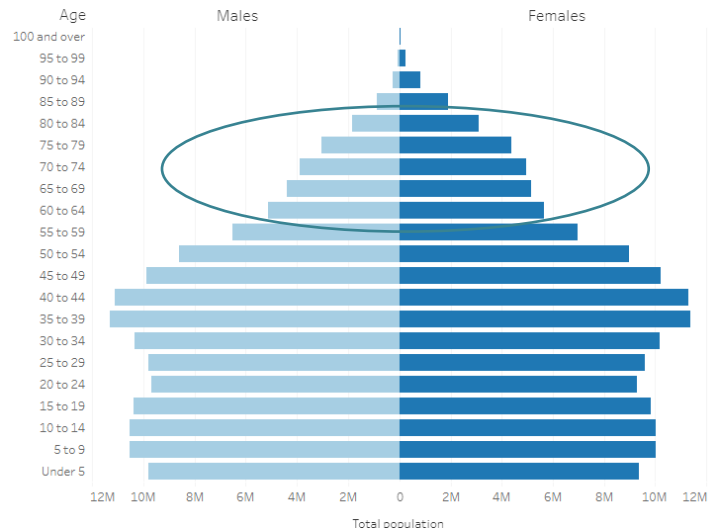
Population: 331,449,281
 Median age: 38.8
 % under 18 years: 22.1
 % 65 years and over: 16.8
 % female: 50.9



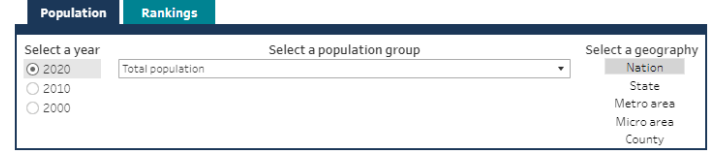
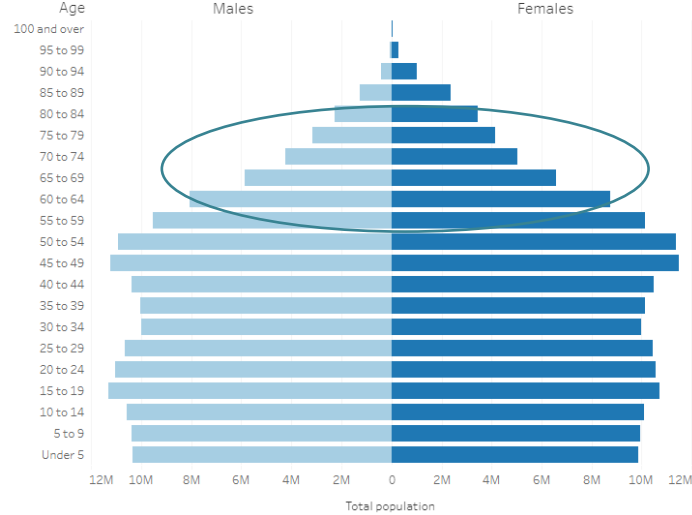
Population pyramid trends in US



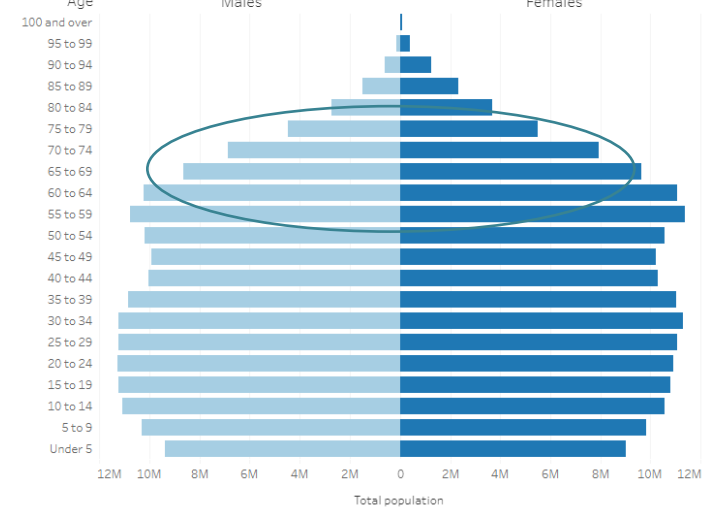
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Population: 331,449,281
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 % under 18 years: 22.1
 % 65 years and over: 16.8
 % female: 50.9



Population pyramid trends in Arizona

Population **Rankings**

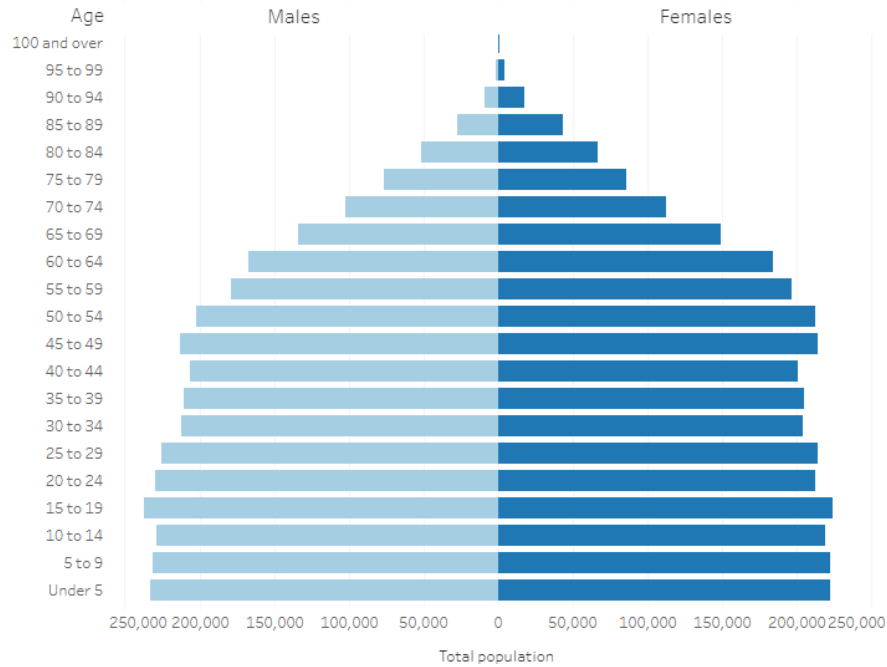
Select a year: 2020 2010 2000

Select a population group: Total population

Select a state: Arizona

Select a geography: Nation State Metro area Micro area County

Population: 6,392,017
 Median age: 35.9
 % under 18 years: 25.5
 % 65 years and over: 13.8
 % female: 50.3



Population **Rankings**

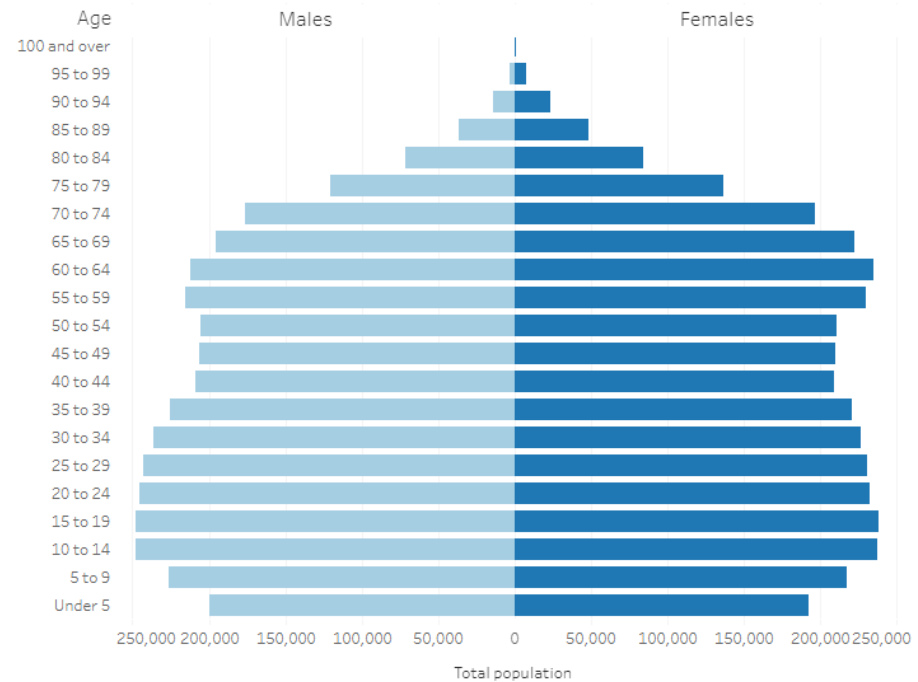
Select a year: 2020 2010 2000

Select a population group: Total population

Select a state: Arizona

Select a geography: Nation State Metro area Micro area County

Population: 7,151,502
 Median age: 38.9
 % under 18 years: 22.5
 % 65 years and over: 18.7
 % female: 50.5



Population pyramid trends in Arizona

Population **Rankings**

Select a year: 2020 2010 2000

Select a population group: Total population

Select a state: Arizona

Select a geography: Nation State Metro area Micro area County

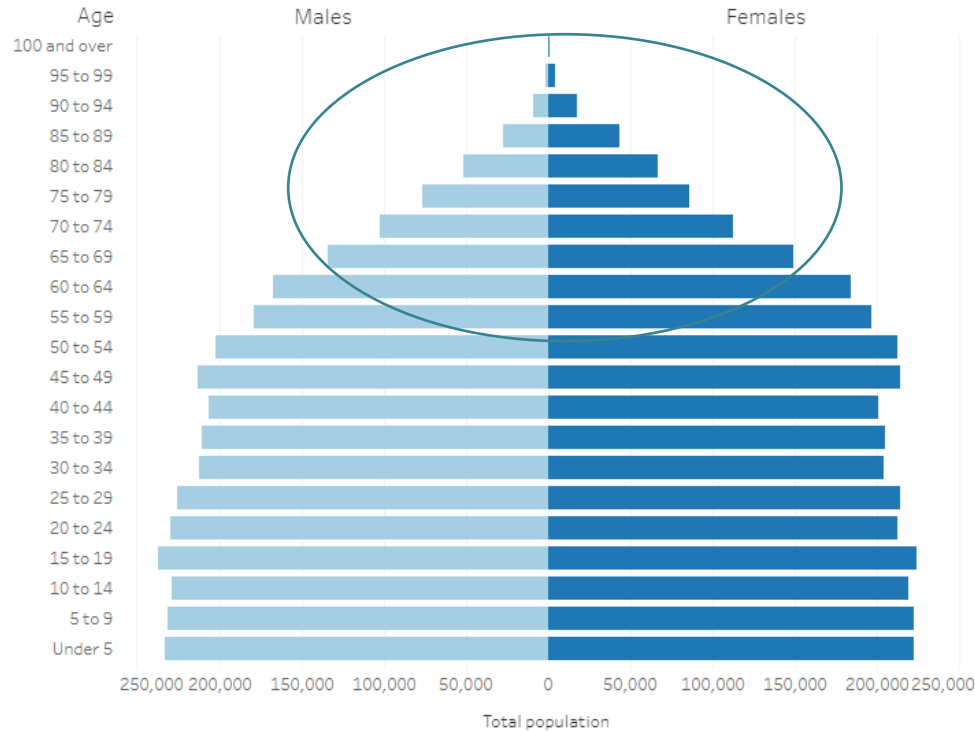
Population: 6,392,017

Median age: 35.9

% under 18 years: 25.5

% 65 years and over: 13.8

% female: 50.3



Population **Rankings**

Select a year: 2020 2010 2000

Select a population group: Total population

Select a state: Arizona

Select a geography: Nation State Metro area Micro area County

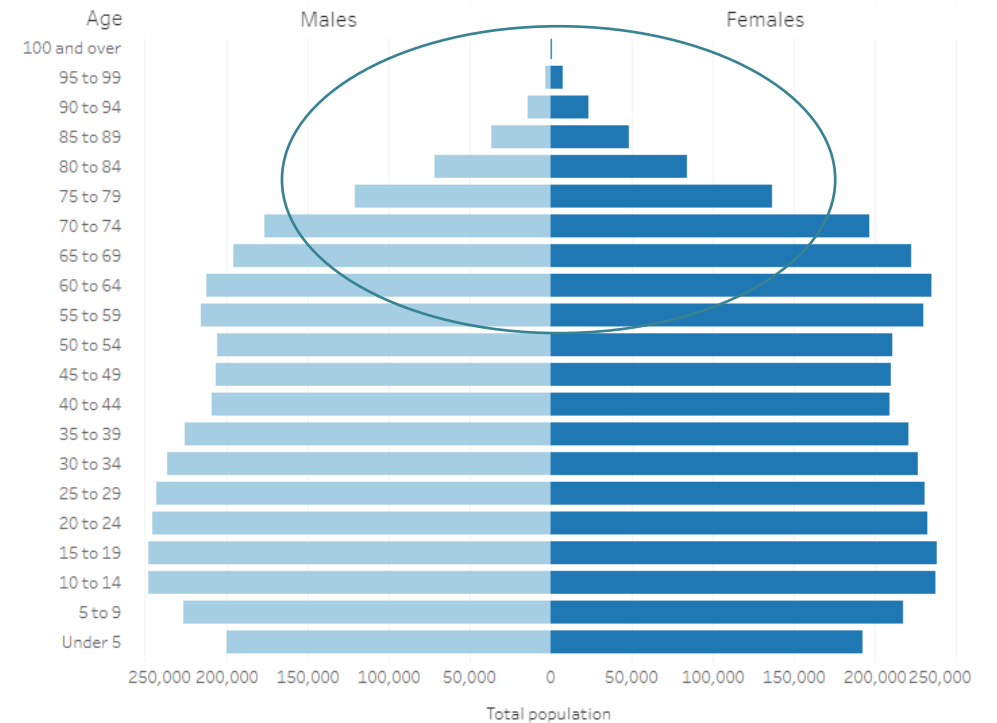
Population: 7,151,502

Median age: 38.9

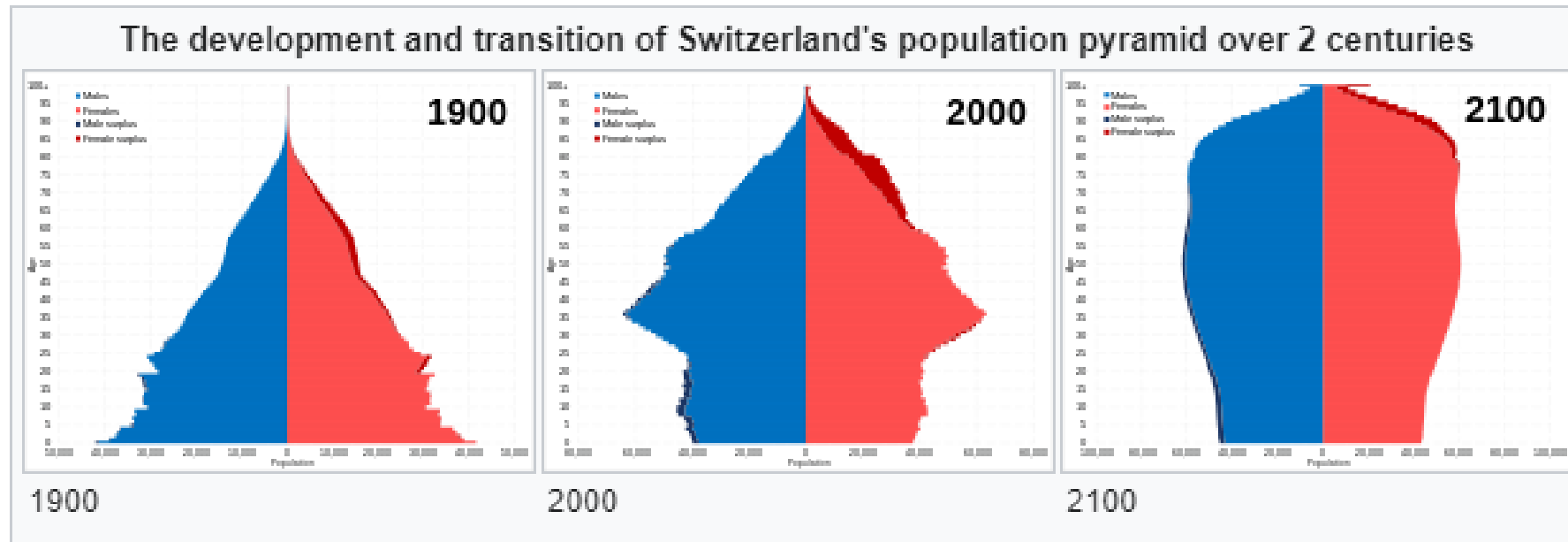
% under 18 years: 22.5

% 65 years and over: 18.7

% female: 50.5



Global phenomenon



Here are the numbers

Doubling from 43.1 million in 2012 to 83.7 million in 2050 due to the aging Baby Boomers and increases in life expectancy

Americans older than 100 are set to quadruple over the next three decades

Larger representation of minorities among older adults increasing from 20.7% in 2012 to 39.1% in 2050

Share of the population 65 and older increased from 12.3% in 2010 to 18.8% in 2020 in Arizona.

The five countries with the largest centenarian populations

Estimated number of centenarians in ...

	2024		2054	
	TOTAL	PER 10,000 PEOPLE	TOTAL	PER 10,000 PEOPLE
Japan	146,000	12	402,000	40
U.S.	108,000	3	513,000	14
China	60,000	<1	767,000	6
India	48,000	<1	402,000	2
Thailand	38,000	5	326,000	49

Note: Population projections show a medium variant scenario.

Source: United Nations population projections.

PEW RESEARCH CENTER

On a positive note,

Education levels are increasing

Older adults are working longer

Poverty rate for older adults has dropped sharply

Double the rate among Latinos/AA compared to non-Hispanic whites

More older adults can meet their daily care needs

Fewer living in nursing homes and assisted living settings than a decade ago

Workforce shortage

American Geriatrics Society (AGS) estimates that one geriatrician can care for about 700 patients.

Do you know what is the ratio for geriatrician to patient ratio currently?

1.07 geriatricians for every 10,000 geriatric patients.

STATE OF THE GERIATRICIAN WORKFORCE

Geriatricians are physician experts in pioneering advanced illness care for older people, with a focus on championing interprofessional teams, eliciting personal care goals, and treating older people as whole persons.

As we live longer, access to a geriatrics-trained workforce will be key to ensuring we can contribute to our communities for as long as possible. **According to the Health Resources & Services Administration, which tracks data on the workforce we need as we age, the supply of geriatricians is projected to decrease modestly between 2018 and 2030 but demand will grow more steeply.**

Research shows that 30% of people 65-years-old and older need care from a geriatrician, and that each geriatrician can care for up to 700 patients. This translates to a larger demand for geriatricians—both nationally and region by region across the U.S.

FAST FACTS

Older Adult Population (2020) **52.4M**

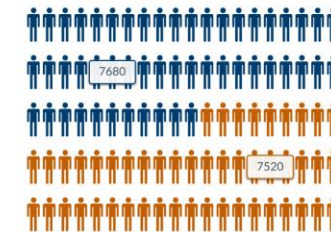
Certified Geriatricians **7,123**

Full-Time Practicing Geriatricians **8,220**

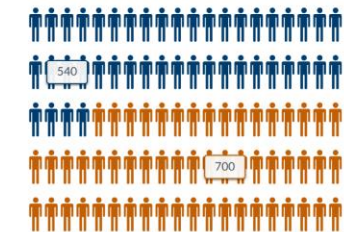


RURILITY SUPPLY & DEMAND *

2018

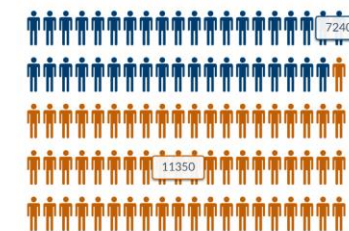


Metro

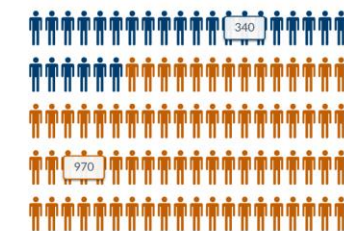


Nonmetro

2030



Metro



Nonmetro

Baseline demand above is constructed from the current need for, and not the utilization of, geriatricians nationwide. Much of the data above are based on projections from the Health Resources and Services Administration's (HRSA's) National Center for Health Workforce Analysis (NCHWA) interactive Workforce Projections Dashboard.

Table 2

Fellowship Matches by Specialty and Applicant Type, 2022 Appointments

Specialty	Number of Positions	Number Filled	Applicant Type											
			U.S. MD Graduates		U.S. DO Graduates		Canadian Graduates		5th Pathway Graduates		U.S. International Graduates		Non-U.S. International Graduates	
Allergy and Immunology														
Allergy and Immunology	147	144	101	70.1%	26	18.1%	0	0.0%	0	0.0%	8	5.6%	9	6.3%
Anesthesiology														
Pain Medicine	378	362	232	64.1	78	21.5	0	0.0	0	0.0	28	7.7	24	6.6
Pediatric Anesthesiology	226	165	117	70.9	27	16.4	0	0.0	0	0.0	12	7.3	9	5.5
Emergency Medicine														
Clinical Ultrasound**	218	155	113	72.9	27	17.4	0	0.0	0	0.0	13	8.4	2	1.3
Emergency Medical Services	111	81	53	65.4	22	27.2	0	0.0	0	0.0	6	7.4	0	0.0
Global Emergency Medicine**	32	22	17	77.3	5	22.7	0	0.0	0	0.0	0	0.0	0	0.0
Medical Toxicology*	54	50	40	80.0	6	12.0	0	0.0	0	0.0	1	2.0	3	6.0
Internal Medicine														
Adult Congenital Heart Disease	22	13	12	92.3	0	0.0	0	0.0	0	0.0	1	7.7	0	0.0
Advanced Heart Failure & Transplant Cardiology	121	69	33	47.8	3	4.3	2	2.9	0	0.0	11	15.9	20	29.0
Cardiovascular Disease	1,120	1,118	568	50.8	132	11.8	0	0.0	0	0.0	111	9.9	307	27.5
Clinical Cardiac Electrophysiology	130	123	56	45.5	7	5.7	4	3.3	0	0.0	15	12.2	41	33.3
Critical Care Medicine	160	157	68	43.3	30	19.1	0	0.0	0	0.0	28	17.8	31	19.7
Endocrinology, Diabetes, and Metabolism	348	342	110	32.2	42	12.3	0	0.0	0	0.0	52	15.2	138	40.4
Gastroenterology	616	614	371	60.4	81	13.2	0	0.0	0	0.0	55	9.0	107	17.4
Geriatric Medicine*	411	210	84	40.0	33	15.7	0	0.0	0	0.0	45	21.4	48	22.9
Hematology	14	14	12	85.7	0	0.0	0	0.0	0	0.0	2	14.3	0	0.0
Hematology and Oncology	662	657	252	38.1	48	7.3	0	0.0	0	0.0	68	10.4	160	24.2



Geriatric psychiatrist Supply vs. Demand

Table 1.29 Projection on Future Number of Geriatric Psychiatrists in the United States. April 25, 2008

Year	Number geriatric psychiatrists	Population 75 and older	Population 75 and older/10,000	Geriatric psychiatrists/10,000 population aged 75 and older
2000	2,508	16,601,000	1660.1	1.5
2010	1,738	18,974,000	1897.4	0.9
2020	1,953	22,852,000	2285.2	0.9
2030	1,659	33,506,000	3350.6	0.5
2040	1,746	44,579,000	4457.9	0.4
2050	1,664	48,763,000	4876.3	0.3

Data on number of geriatric psychiatrists are based on current training numbers. A significant increase or decrease in psychiatrists entering the field could change the projections considerably. 2000 data are actual numbers, while the remaining years are estimates.

As of 2011: 1751 board certified geriatric psychiatrists in US

Hurdles for recruitment

Stigma. It is not sexy.

Working with chronic illness and mortality.

Extra training does not translate to higher pay

Medicare reimbursement rates

Not enough exposure in medical schools

Potential solutions



Improving training in the programs



Train more geriatric psychiatrists



Better payment models

Based on complexity of care

Paying higher amount for board certified geriatricians

Loan forgiveness in high need specialties

Value based health systems



Workforce enhancement:

Train existing workforce

- Project ECHO
- Collaborative care models
- Training physician extenders

Creating new workforce

- Physician extenders



AI

Potential solutions

Improving training in the programs (next slide)

Train more geriatric psychiatrists

Better payment models

Workforce enhancement:

AI

Factors Promoting Career Interest in Academic Geriatric Psychiatry

- Positive experiences working with older adults
- Research experience in training
- Working with mentor
- Early exposure to geriatric psychiatry rotation in training
- Working with complex clinical issues
- Annual conferences

Lieff SJ, Tolomiczenko GS, Dunn LB. Am J Geriatr Psychiatry. 2003
Rej S, Laliberte C, Rapoport MJ et al. Am J Geriatr Psychiatry. 2014

Ideas implemented over years

Geriatric interest groups from AGS

Geriatric enhancement pathway

Virtual fellowship fair from AzPsychSociety in Aug 2023

Collaboration with community programs with no geriatric psychiatrists

AAGP scholars' program

Engaging undergraduates in national conferences

Discussed not implemented:

Increasing the requirement of geri-psych in residency from 1 month

Fast tracking like child psych

Predictors of Pursuit of Geriatric Psychiatry Fellowship training

- Data from a survey of U.S. general adult psychiatry residency program directors suggested an association between the number of geriatric psychiatrists in the department with the number of residents pursuing geriatric fellowship training
- Residency programs must recruit and retain geriatric psychiatry faculty to formalize and enrich geriatric psychiatry curriculum as well as mentor trainees to inspire further interest in the field
- To augment these efforts, national psychiatry subspecialty and training organizations should collaborate to ensure adequate geriatric psychiatry training and mentorship even when local resources are lacking

FELLOWSHIPS OFFERED AND POSITIONS FILLED

NUMBER OF PSYCHIATRIC FELLOWS IN SUBSPECIALTIES

Year 2017

Subspecialty	Total Filled Complement	Total Approved Complement	Percent Filled	Total Programs
Addiction Psychiatry	83	129	64.34%	49
Child and Adolescent Psychiatry	882	1,105	79.82%	138
Consultation-Liaison Psychiatry	90	143	62.94%	60
Forensic Psychiatry	84	123	68.29%	47
Geriatric Psychiatry	59	155	38.06%	60

Year 2018

Subspecialty	Total Filled Complement	Total Approved Complement	Percent Filled	Total Programs
Addiction Psychiatry	85	132	64.39%	50
Child and Adolescent Psychiatry	883	1,132	78.00%	140
Consultation-Liaison Psychiatry	78	144	54.17%	62
Forensic Psychiatry	73	127	57.48%	48
Geriatric Psychiatry	52	157	33.12%	61

Source: ACGME Special Data Request, 2020

Year	Addiction	Child and Adolescent	Forensic	Geriatric	Consultation-Liaison
2014	66	820	66	58	82
2015	80	826	72	58	79
2016	77	840	63	56	80
2017	74	865	79	53	86
2018	83	869	66	52	71
Total Growth 2014-2018	25.76%	5.98%	0.00%	-10.34%	-13.41%

Source: ACGME Data Resource Book 2014-2018, Table C.6

Number of Active Residents by Specialty and Subspecialty and Academic Year, 2016-2017 to 2020-2021

	Academic Year					5-Year Change	
	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021		
Psychiatry	5,619	5,907	6,247	6,618	6,976	1,357	24.2%
- Addiction medicine (multidisciplinary) *			39	79	129	90	230.8%
- Addiction psychiatry	77	74	83	78	86	9	11.7%
- Child and adolescent psychiatry	840	865	869	889	919	79	9.4%
- Forensic psychiatry	63	79	66	80	80	17	27.0%
- Geriatric psychiatry	56	53	52	42	44	-12	-21.4%
- Consultation-liaison psychiatry	80	86	71	86	82	2	2.5%

Practice Patterns of International and US medical graduate psychiatrists

IMGs make up to 50% or more of practicing geriatric psychiatrists in the USA

International medical graduates spend 35% more time working with geriatric population compared to US medical graduates

IMGs have a larger presence in the public sector and in patient settings than US medical graduates

International medical graduates are more likely than US medical graduates to obtain income from Medicare and Medicaid and less likely to have patients with self-payments

With an expanding number of US IMGs, international IMGs will decrease

Certain subspecialties like Geriatrics will be hard to sustain

International Medical School Graduates

International Medical School						
	2014	2015	2016	2017	2018	TOTAL
General Psychiatry	1,727 (33.37%)	1,704 (31.86%)	1,577 (28.07%)	1,498 (25.36%)	1,429 (22.9%)	7,935
Addiction Psychiatry	33	27	32	30	33	155
Child and Adolescent Psychiatry	257	258	281	303	277	1,376
Forensic Psychiatry	23	24	24	25	16	112
Geriatric Psychiatry	11	23	18	19	23	94
Consultation-Liaison Psychiatry	22	27	27	26	24	126

APA Resident/Fellow Census 2019

ABPN Certification

Specialty/Subspecialty	Year Certification Began	Certificates Issued in 2021	Total Certificates* Issued as of December 31, 2021
Psychiatry	1935	1844	68,139
Child and Adolescent	1959	432	12,180
Geriatric	1991	87	3,638
Addiction	1993	146	2,806
Forensic	1994	143	2,675
Consultation-Liaison	2005	160	1,886

* Total includes lapsed certificates

Improving the workforce

Train existing workforce

- Project ECHO
- Training physician extenders
- Collaborative care models

Creating new workforce

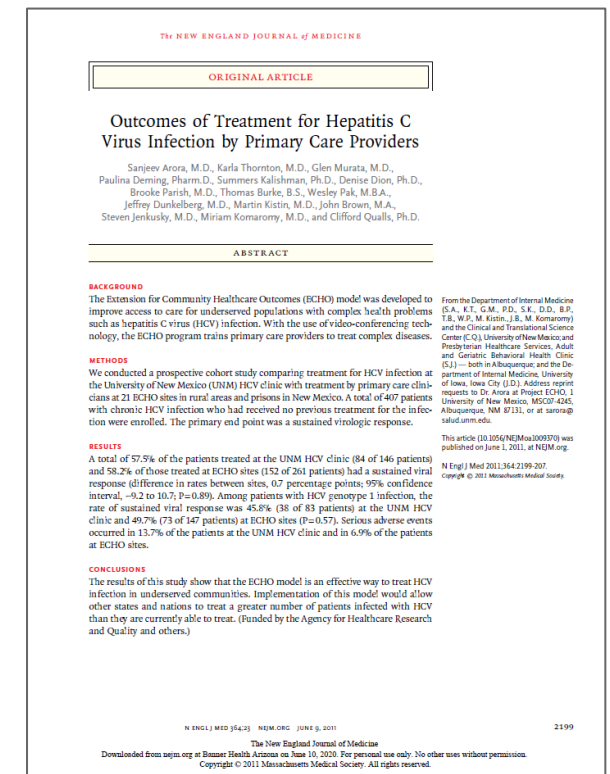
- Physician extenders
- Dementia care partners

History of Project ECHO

Launched in 2003, Project ECHO grew out of one doctor's vision.

Sanjeev Arora, MD, a social innovator and liver disease specialist in Albuquerque, NM, was frustrated that he could serve only a fraction of the hepatitis C patients as his clinic was one of only two in the entire state.

- He wanted to serve as many patients as possible, so he created a free educational model and mentored community providers across New Mexico in how to treat the condition.
- The project was effective: a study published in the New England Journal of Medicine found that hepatitis C care provided by ECHO-trained community providers was equal to that of care provided by university specialists.





ECHO model is not 'traditional telemedicine'. Treating Physician retains responsibility for managing patient.



BAI Dementia ECHO is made possible through partnership between Project ECHO and Banner Alzheimer's Institute.



Based on sessions, designed around sharing of best practices, case-based learning and mentorship bringing specialists closer to providers



12 virtual sessions (hosted on Zoom) over ~ 6 months



Each session consists of a 15 min didactic focusing on an area of specialty knowledge followed by case presentation(s) and discussion.



Baseline and Post Participation Survey and Post Session Evaluations will be requested.



Low-cost CMEs.

Significant milestones

Started the program in 2020 with philanthropic support
Grant from Maricopa county for 15 months to train 250 participants.

Role in population health management

- Engagement with Pop health at Banner

- Value proposition for healthcare plans

- Included in the BOLD grant for the Maricopa grant

Partnership with AZGS and HOV with workshops

Progress thus far:

- 12 completed cohorts

- 4 cohorts planned for 2024

- 342 participants in 2023

- More than 500 total participants

Barriers in implementation

1. Time constraints of participants
2. Case discussants
3. Ongoing funding mechanisms
4. Training the team to run the sessions and identifying back ups.

Lessons learned

For more information, or to register, visit
www.BannerHealth.com/DementiaECHO
or
SCAN THIS CODE ⇨



Challenges finding the right time of the day for a group: Leader may not know what works for most participants



Role of organizational champions



Mutual fit with other programs like Dementia Care Partners



Case presentation and forms can be intimidating



Session zero concept: shorter case discussion to facilitate case sign up



Awkward silence works for case discussion sign ups!

Dementia Care Partners (DCP)



Partnered with Primary
Care Providers



Services provided in-
home, virtually or by
phone



Interventions leverage
a unique workforce:
dementia capable
health coaches (CNA)

Intensive training
over 8 weeks



Psychiatrist, RN, &
Social Work oversight in
weekly huddles



Free service



Key goals:

Show impact to reduce
total health care costs

- Reduce emergency
room visits &
hospitalizations

Improved quality
through appropriate
medication use

Increased provider and
caregiver satisfaction

Reduce caregiver
burden / dyad QOL

DCP Benefits



Unburden Primary Provider

Increase efficiency

Ease of communication via EMR

Offer initial and quarterly updates



Better meet needs of dyad

Proactively minimize barriers

Calls and visits provided to support medical care

Prevent/reduce crisis



Develop a new workforce

Dementia capable health coaches

DCP accepted to GUIDE

Guiding an Improved Dementia Experience (GUIDE) by CMS in 2023

8-year model test aiming to support people living with dementia and their caregivers.

Alternative payment for participants that deliver key supportive services

Care navigator who will help them access services and supports

Participants get paid per member per month rate

Medicare beneficiaries voluntarily sign up

Benefits: 24/7 support, respite services, comprehensive assessments and support

DCP accepted in the established track with start date of July 1,2024

Geriatric Workforce Enhancement Program (GWEP)

Supported by Health Resources and Services Administration (HRSA) grant

Educate and train the health care and supportive care workforces to care for older adults by collaborating with community partners

Maximizes patient and family engagement

Integrating geriatrics and primary care

Five-year grant

Maximum amount one million dollars for each year of the grant

Must spend \$230,000 annually on ADRD education and training

GWEP in Arizona

University of Arizona received three-year award in 2015

Did not qualify as a program for 2019

UofA has submitted an application for 2024 cycle

Project ECHO for Dementia is part of the application

Awardee announcement in July 2024

Other important programs



The Eldercare Workforce Alliance (The Tides Center, San Francisco, California), a group of thirty-five national organizations focused on workforce issues



Nurses Improving Care for Health system Elders Program, which provides practice-based education to enhance geriatric skills for 40,000 nurses in 449 hospitals.

Challenges in clinical research among older adults

Why is it important for people to participate in research

Inequity in opportunities to participate in and benefit from research.

Arbitrary exclusion (direct or indirect) based on a characteristic such as age is a form of discrimination.

Study findings may not apply to the breadth of people with a condition

Therapies may not be offered due to absence of evidence or may be ineffective or unsafe

Older people are often explicitly or implicitly excluded from research

Additional challenges in dementia research

Gatekeepers

Ethical issues:

Consent: proxy decision-makers (e.g., family members) -informal

Assent requirements

How to include older adults

Individual factors

- **Not have upper age limits in inclusion criteria**
- **Inclusion of those with cognitive impairment**
- **Not have comorbidity exclusions (except where there is an intervention contraindication)**
- **Clear explanations of why research is relevant to older people's health and wellbeing**

Organizational factors

Those commissioning, funding and approving research should

- ensure the inclusion of older people
- include older people and those with expertise in ageing

Interpersonal factors

- **Involve advocates and peers in designing research that meets the needs of older people**
- Involve health and social care professionals with expertise in ageing in designing research that meets the needs of older people
- Communication about research should be tailored to the needs of older people
- Those who meet the eligibility criteria should be offered the opportunity to participate in research
- Consider the involvement of caregivers

Community factors

- Researchers should consider different and flexible approaches to promote accessibility of the research e.g. financial support to attend research centers or offering home visits for data collection
- Support, or alternatives should be offered to digital data collection and interventions

New paradigms in Alzheimer's treatment

Aducanumab and lecanemab are mAbs approved by FDA to remove amyloid

Controversial approval of Aducanumab through accelerated pathway in 2021

On January 6, 2023, lecanemab received accelerated FDA approval for the treatment of AD

On July 6, 2023, lecanemab received full FDA approval for MCI and mild dementia due to AD

CMS has agreed to cover the cost of the infusion

Medicare to cover PET amyloid scans

Donanemab demonstrated significant slowing of cognitive decline

New paradigms in treatment

Monoclonal antibodies for treatment of Alzheimer's

Infusion center infrastructure

Personnel training (e.g. radiologists, prescribers)

Emergency room preparedness

ARIA detection

Stroke management

Age friendly hospital systems

Initiative of [The John A. Hartford Foundation](#) and the Institute for Healthcare Improvement (IHI)

Everybody in the healthcare setting is involved

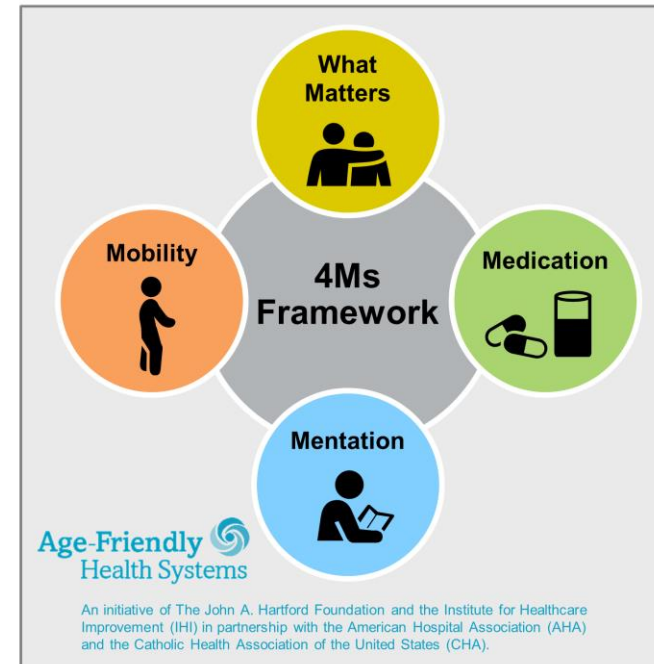
Age-Friendly Health Systems aim to:

- Follow an essential set of evidence-based practices;

- Cause no harm

- Align with What Matters to the older adult and their family caregivers.

As of January 2023, more than 2,900 health care organizations have earned either level 1 (Participant) or level 2 (Committed to Care Excellence) recognition.



For related work, this graphic may be used in its entirety without requesting permission.
Graphic files and guidance at ihi.org/AgeFriendly

What Matters

Know and align care with each older adult's specific health outcome goals and care preferences including, but not limited to, end-of-life care, and across settings of care.

Medication

If medication is necessary, use Age-Friendly medication that does not interfere with What Matters to the older adult, Mobility, or Mentation across settings of care.

Mentation

Prevent, identify, treat, and manage dementia, depression, and delirium across settings of care.

Mobility

Ensure that older adults move safely every day in order to maintain function and do What Matters.

Dementia Friendly communities



A dementia-friendly community is a city, town or village where people with dementia are understood, respected and supported.



Helping people live well with dementia and remain a part of their community



Three key areas

People: awareness and training

Process: customer support and signposting

Place: physical environment and wider community

Dementia Friendly communities

Dementia Friendly America initiative grew out of a Minnesota program called [ACT on Alzheimer's](#).

Over 300 dementia friendly community efforts across the United States.

Arizona Dementia Friendly communities

Fountain Hills
Glendale
Goodyear
Mesa
Phoenix

Pima
Scottsdale
Sun Lakes
Surprise
Tempe

Dementia Friendly America Ten Sectors

1) Transportation, Housing and Public Spaces (Local Government)

Infrastructure that makes communities more livable for people with dementia and their caregivers.

2) Businesses

Dementia-supportive customer service and environments and policies that support employee caregivers.

3) Legal and Advance Planning Services

Legal services that help vulnerable clients express their wishes early and avoid problems such as unpaid expenses.

4) Banks and Financial Services

Dementia friendly practices that help maintain clients' independence while protecting them from problems.

5) Neighbors and Community Members

Raising awareness to help neighbors and community members understand and support people living with dementia.

6) Independent Living

Home-based services available to maximize independence and promote autonomy and a high quality of life.

7) Communities of Faith

Faith communities use dementia friendly practices to provide a welcoming, compassionate environment and spiritual connection.

8) Care Throughout the Continuum

Early diagnosis of dementia and ongoing medical care; patient education; and connecting patients and their caregivers with community resources that promote quality of life.

9) Memory Loss Supports and Services

A spectrum of settings and services needed by people with dementia - from long term care facilities and assisted and independent living residences, to home care, adult day services, and hospice.

10) Emergency Planning and First Response

Community planning and family preparation considers safety, security, and needs of people with dementia in disaster planning and emergency response.

Population health

Defined as a “concept of health” characterized by both objective and subjective determinants and health outcomes of a population

Successful aging as the low probability of disease and disease-related disability, high cognitive and physical function capacity, and active engagement with life.

The role of subjective data in defining successful aging

Three basic goals:

- to improve health

- improve the health care experience

- reduce health care costs

Continuum of Public health for older adults

Healthy and Active

- No health conditions
- Staying healthy is key

At risk but healthy

- Chronic condition which is well managed
- Focus on staying healthy and preventing progression
- Preventing other conditions

Coping with disease

- Have multiple health conditions
- Slow disease progression or reversal

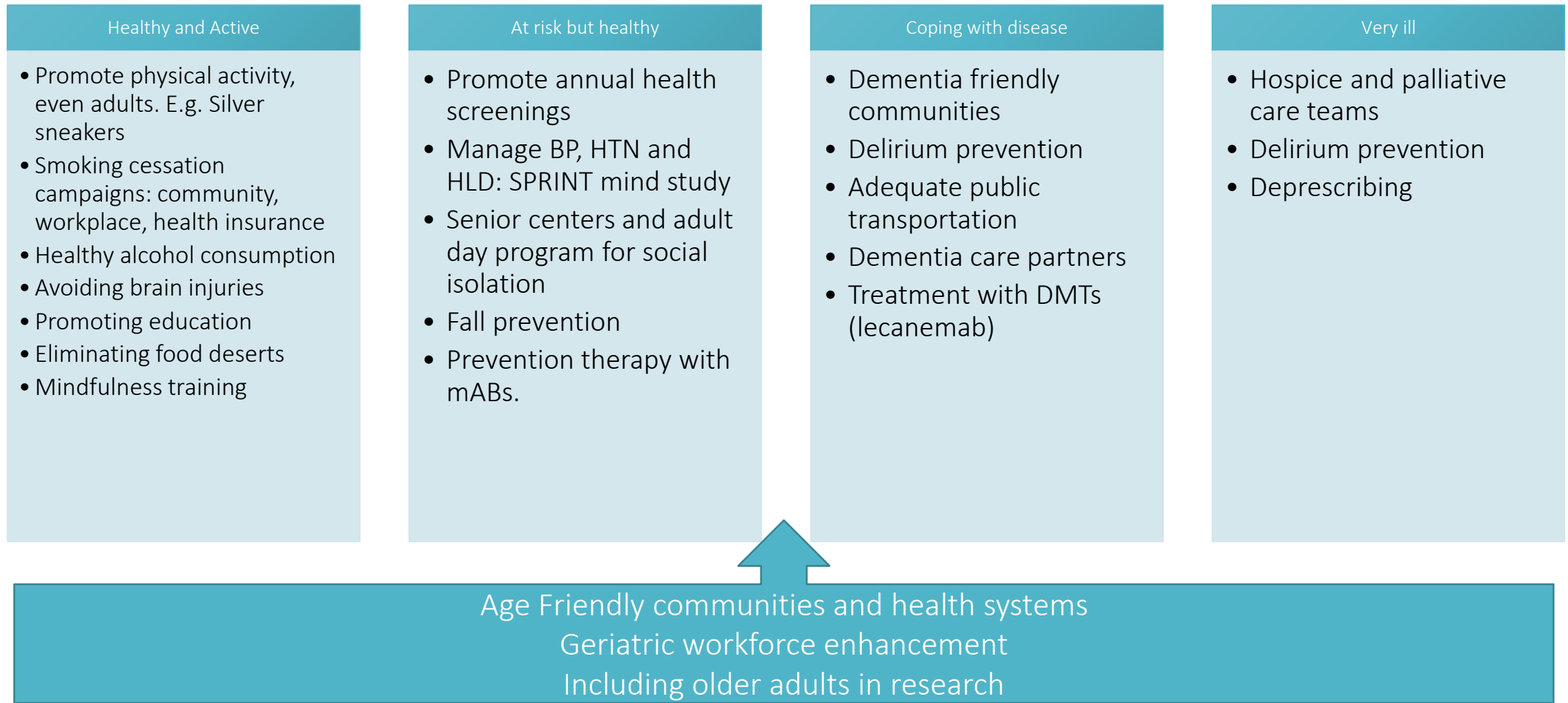
Very ill

- severe medical issues

Most older adults fall in these two categories



Continuum of Public health for older adults



Thank you