OVERVIEW OF AGING

Barbara E. Weinstein, Ph.D.

Graduate Center, CUNY
New York, New York

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DISCLOSURE STATEMENT

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SESSION OBJECTIVES

DEMOGRAPHIC IMPERATIVES

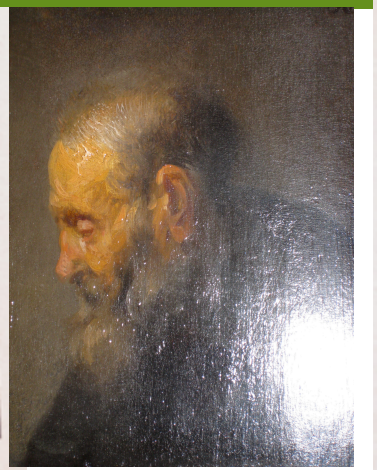
SOCIAL REALITIES OF AGING

HEALTHY AGING

PRINCIPLES OF GERIATRIC CARE

PATIENT CENTERED CARE

THE MANY FACES OF AGING

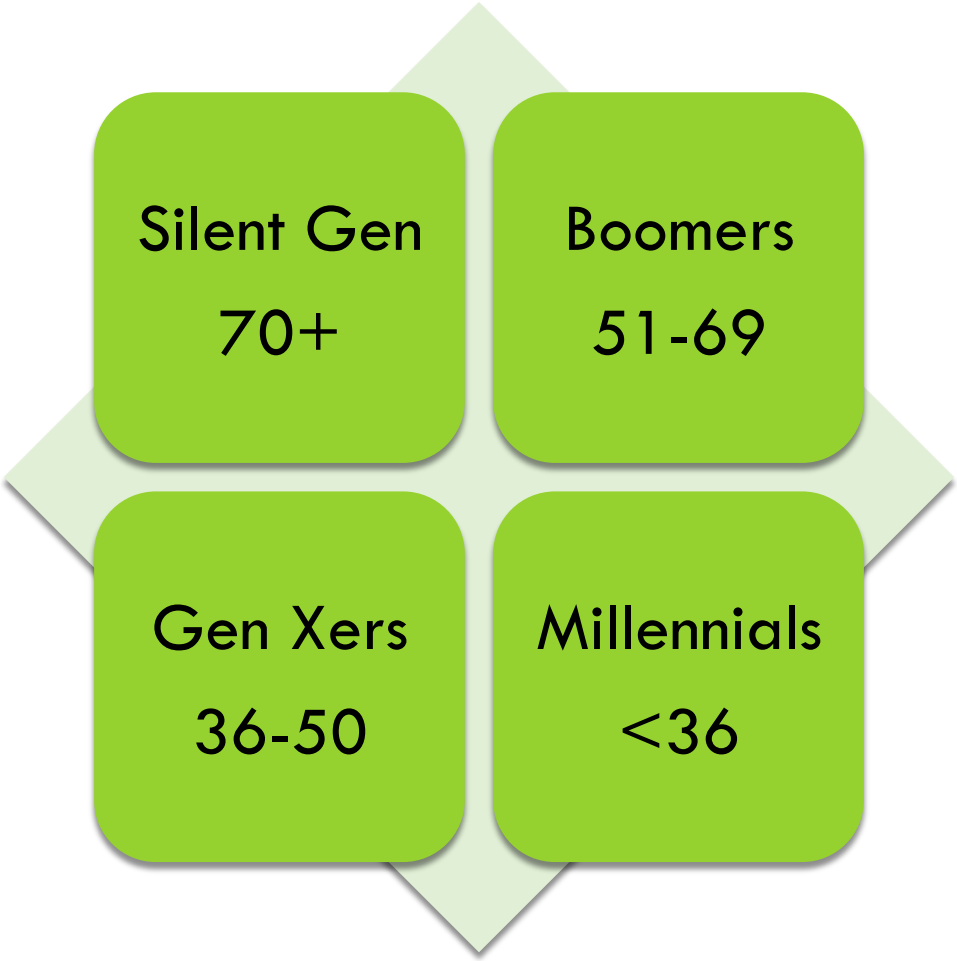


JONAS MEKAS, 92

FROM Born in Semeniskiai, Lithuania, lives in a loft in Clinton Hill, Brooklyn
MARITAL STATUS Divorced, two children, one of whom, his son, Sebastian, lives with him
CAREER Works as a filmmaker, writer, poet; a founder of Anthology Film Archives
TODAY At 92, Mr. Mekas is busier than ever. The good news is that his doctor said he would live to 120.

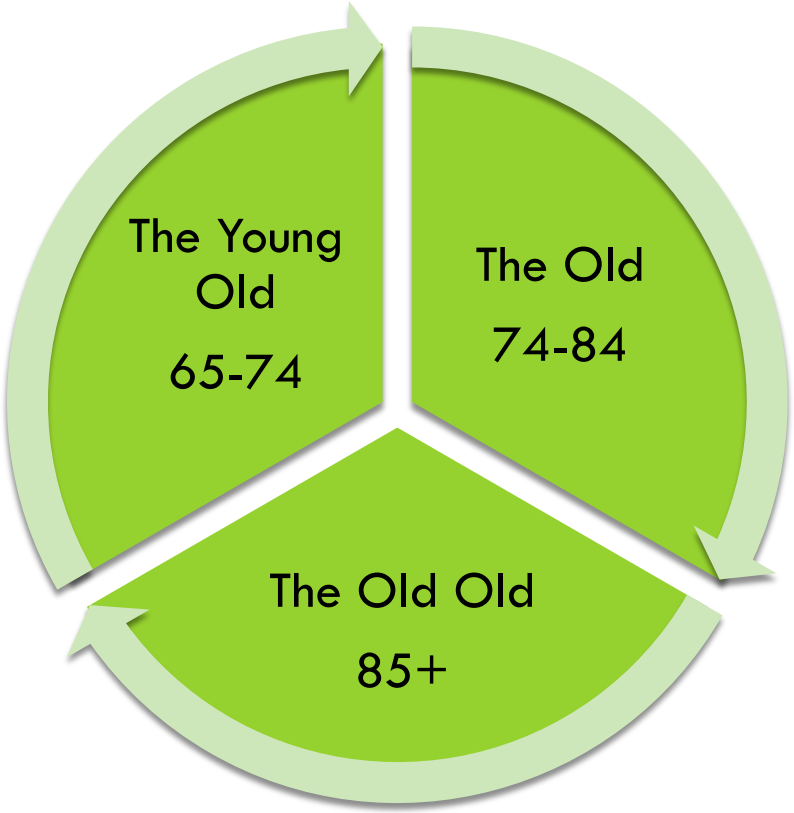
HELEN MOSES, 90

FROM Born in Spring Valley, N.Y.; lives at the Hebrew Home at Riverdale in the Bronx
MARITAL STATUS Widowed, three children, dating Howie Zeimer, her neighbor at the nursing home
CAREER Worked as a sales clerk at the Gap
TODAY Ms. Moses found love at the nursing home; now she and Mr. Zeimer plan to marry.



BORN- 1948-1964

WHO ARE THE OLDER ADULTS?



SILENT GEN

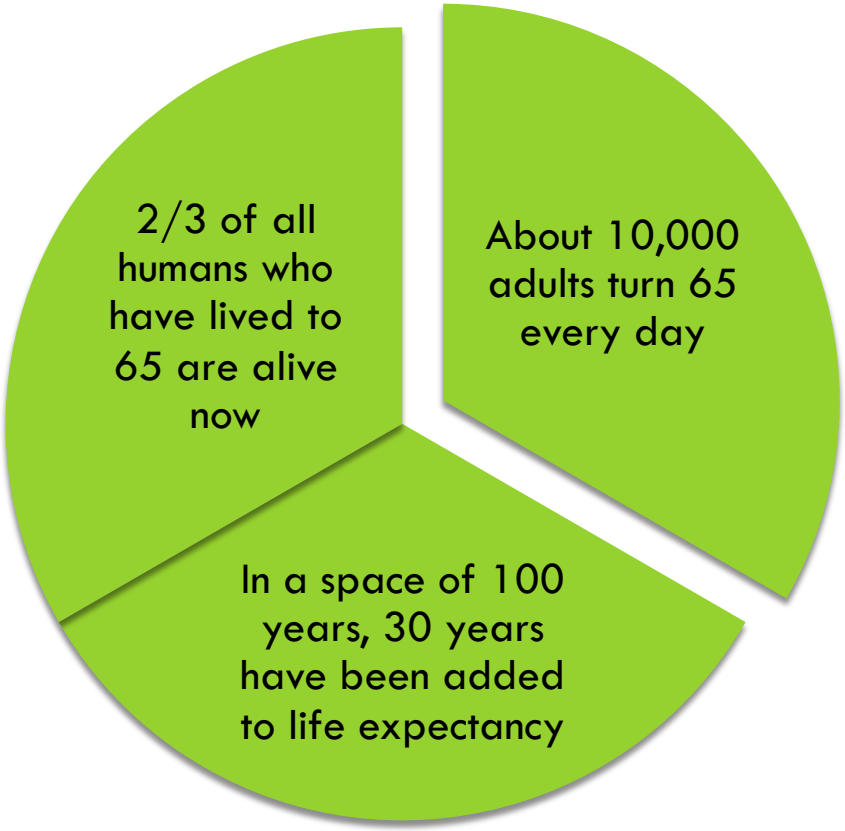
How old are you? How old are you?

PHYSIOLOGIC AGING

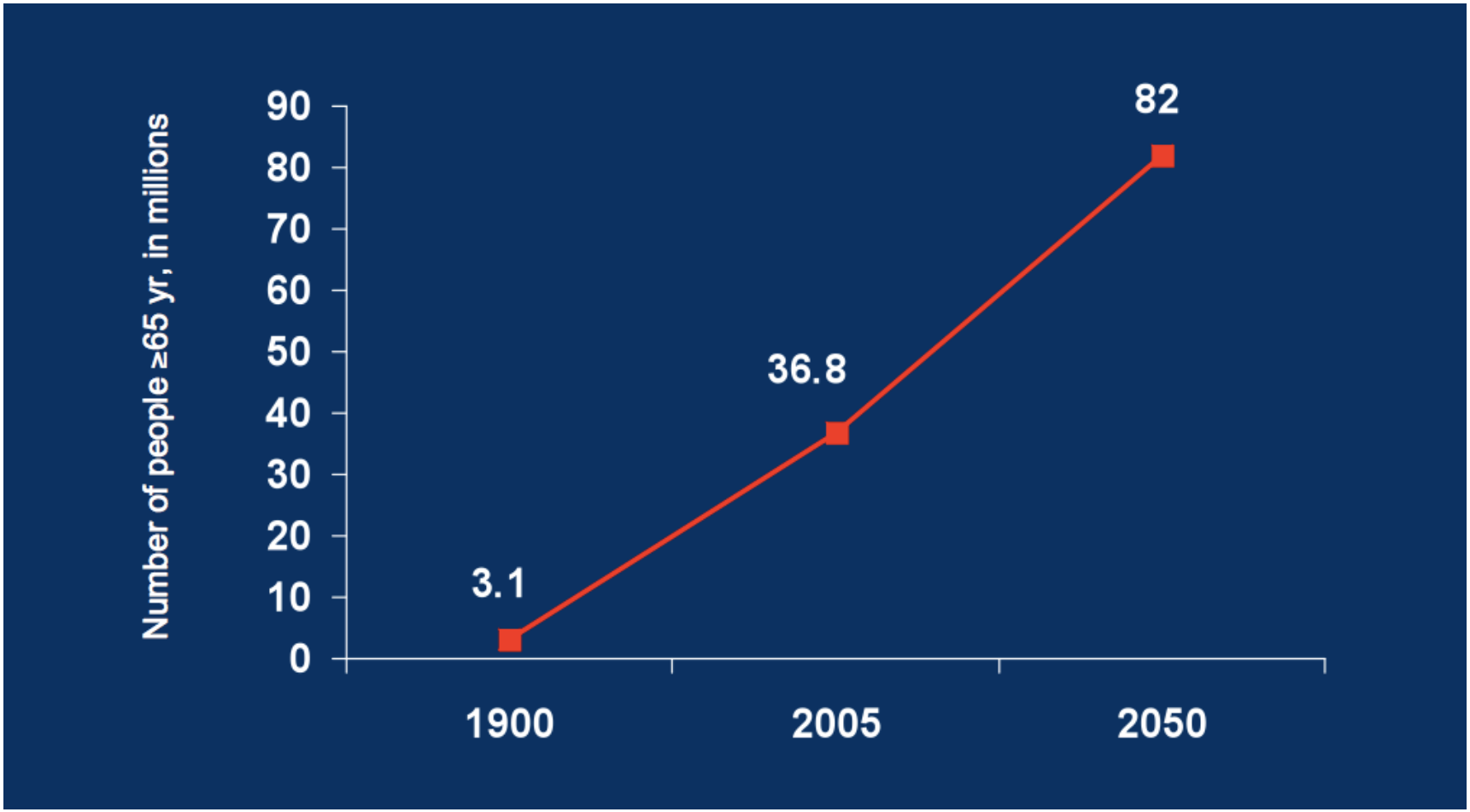
Old age…when you start feeling younger than you actually are?!

Launer & Lemke, 2009

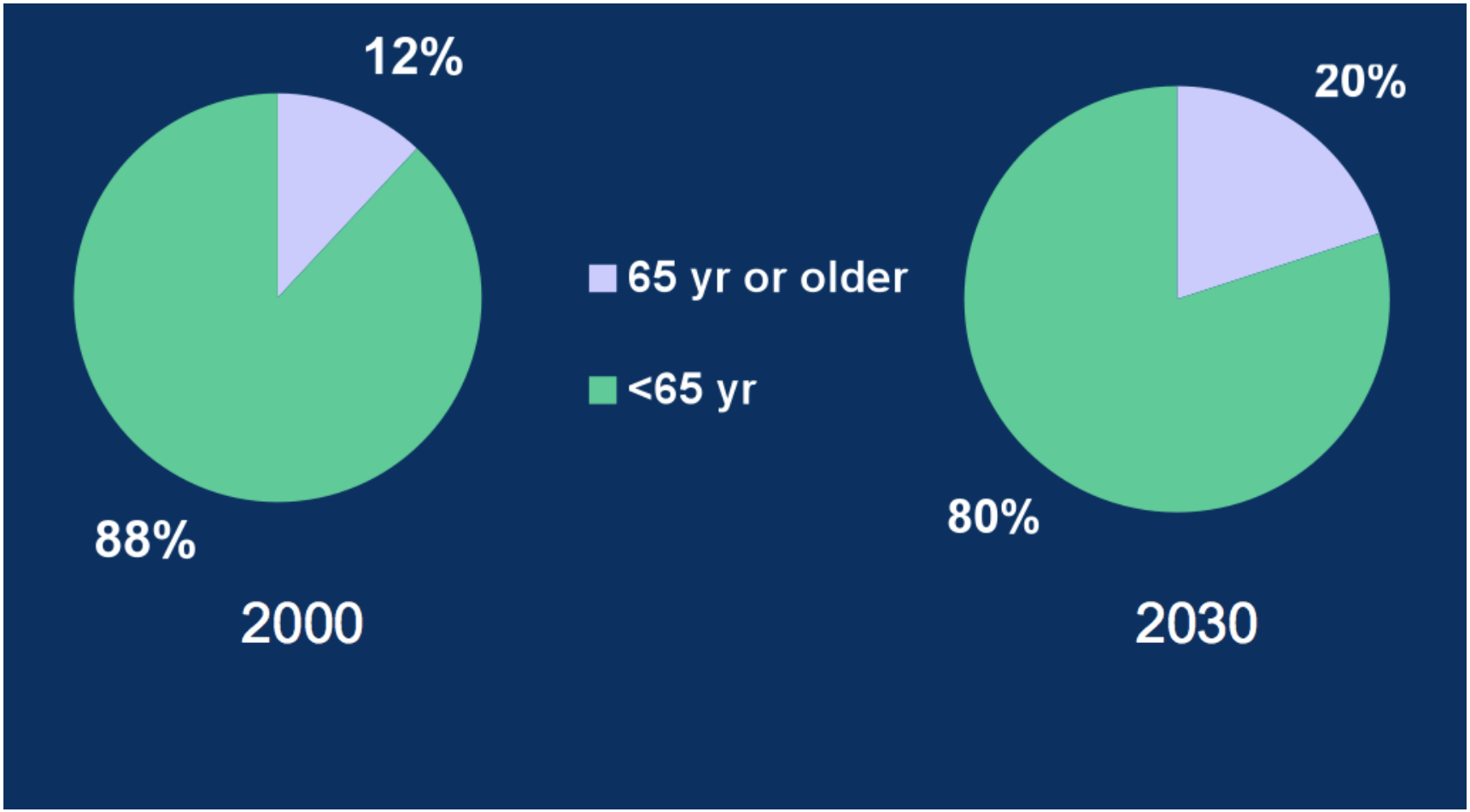
DEMOGRAPHIC REALITIES



GROWTH IN OVER 65 POPULATION

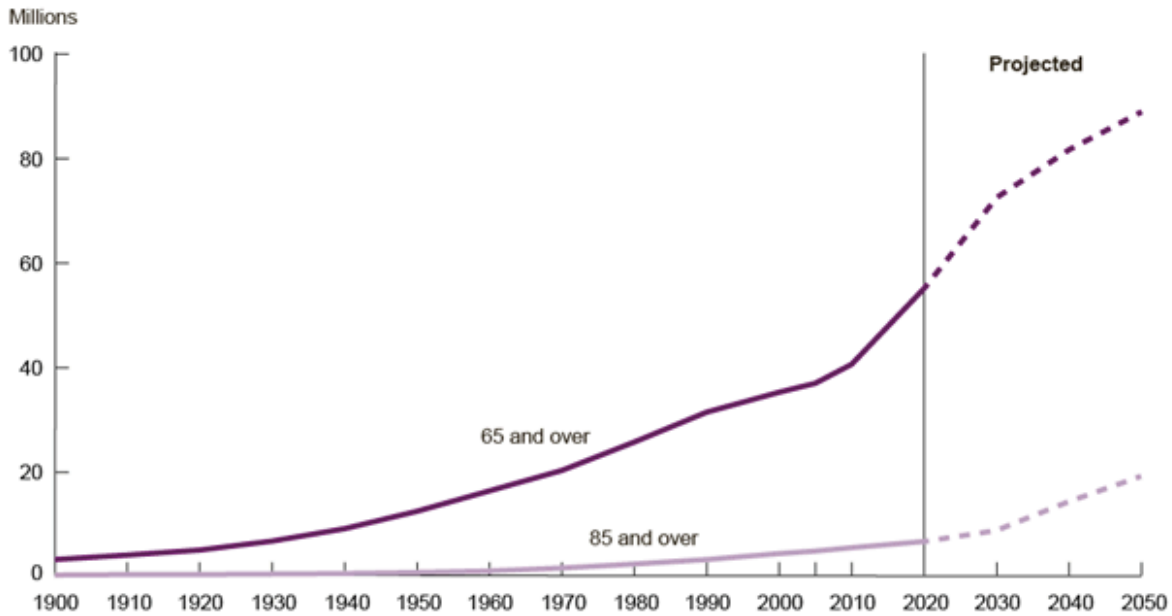


AGING IN THE UNITED STATES



GROWTH IN OLD AND OLDEST OLD POPULATIONS

Population age 65 and over and age 85 and over, selected years 1900–2010 and projected 2020–2050

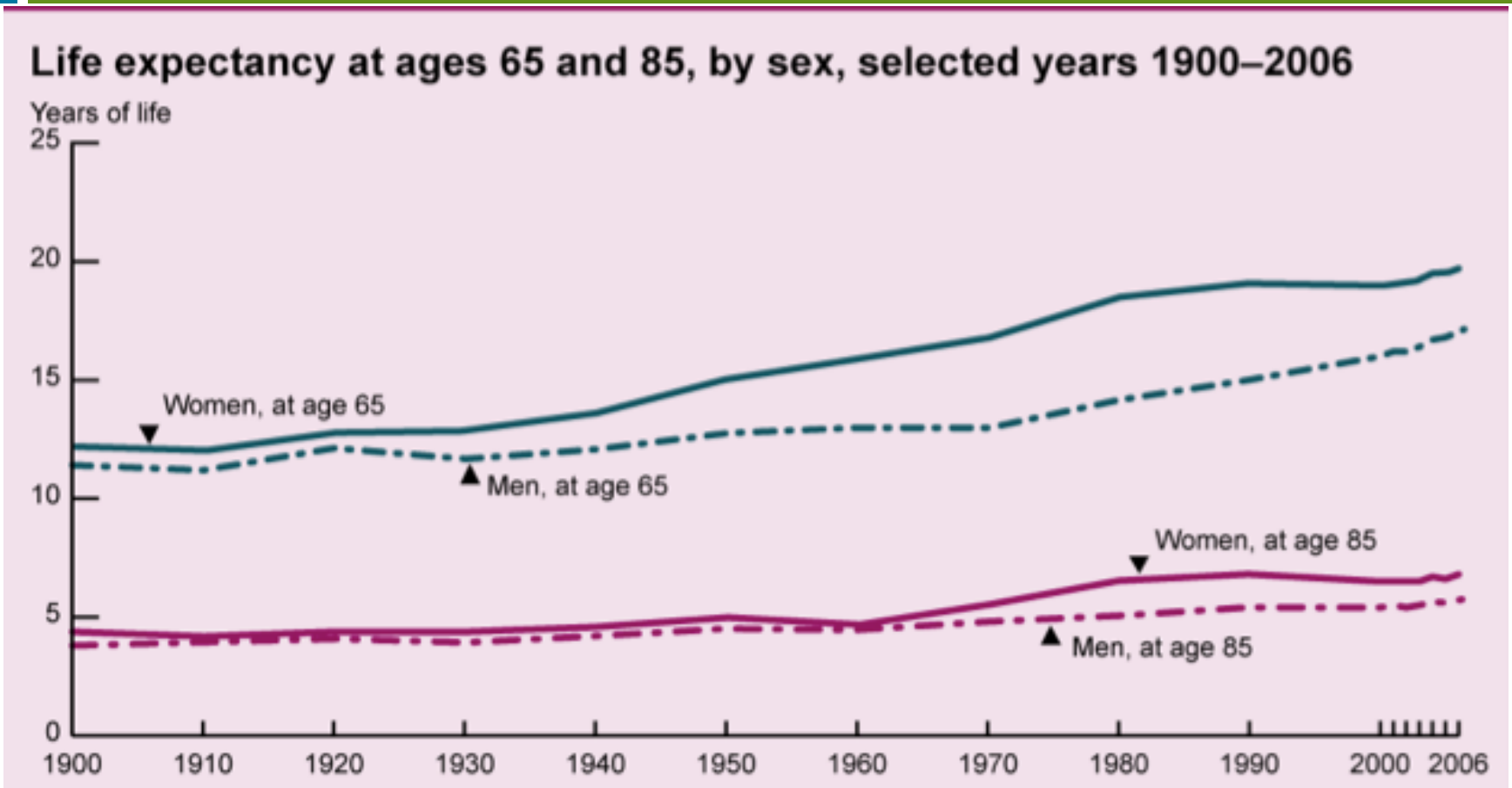


NOTE: These projections are based on Census 2000 and are not consistent with the 2010 Census results. Projections based on the 2010 Census will be released in late 2012.

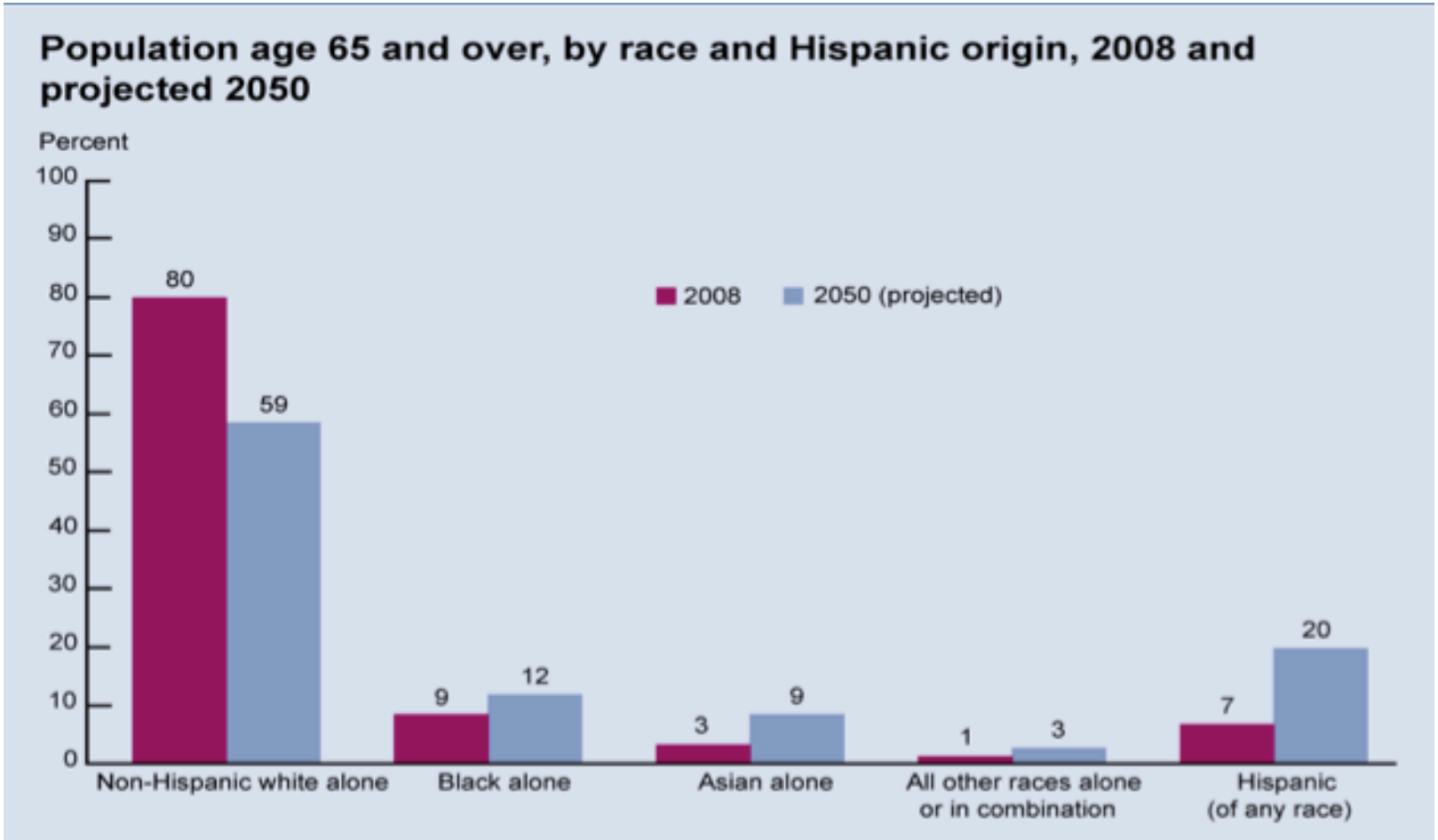
Reference population: These data refer to the resident population.

SOURCE: U.S. Census Bureau, 1900 to 1940, 1970, and 1980, U.S. Census Bureau, 1983, Table 42; 1950, U.S. Census Bureau, 1953, Table 38; 1960, U.S. Census Bureau, 1964, Table 155; 1990, U.S. Census Bureau, 1991, 1990 Summary Table File; 2000, U.S. Census Bureau, 2001, *Census 2000 Summary File 1;* U.S. Census Bureau, Table 1: Intercensal Estimates of the Resident Population by Sex and Age for the U.S.: April 1, 2000 to July 1, 2010 (US-EST00INT-01); U.S. Census Bureau, 2011. *2010 Census Summary File 1;* U.S. Census Bureau, Table 2: Projections of the population by selected age groups and sex for the United States: 2010–2050 (NP2008-t2).

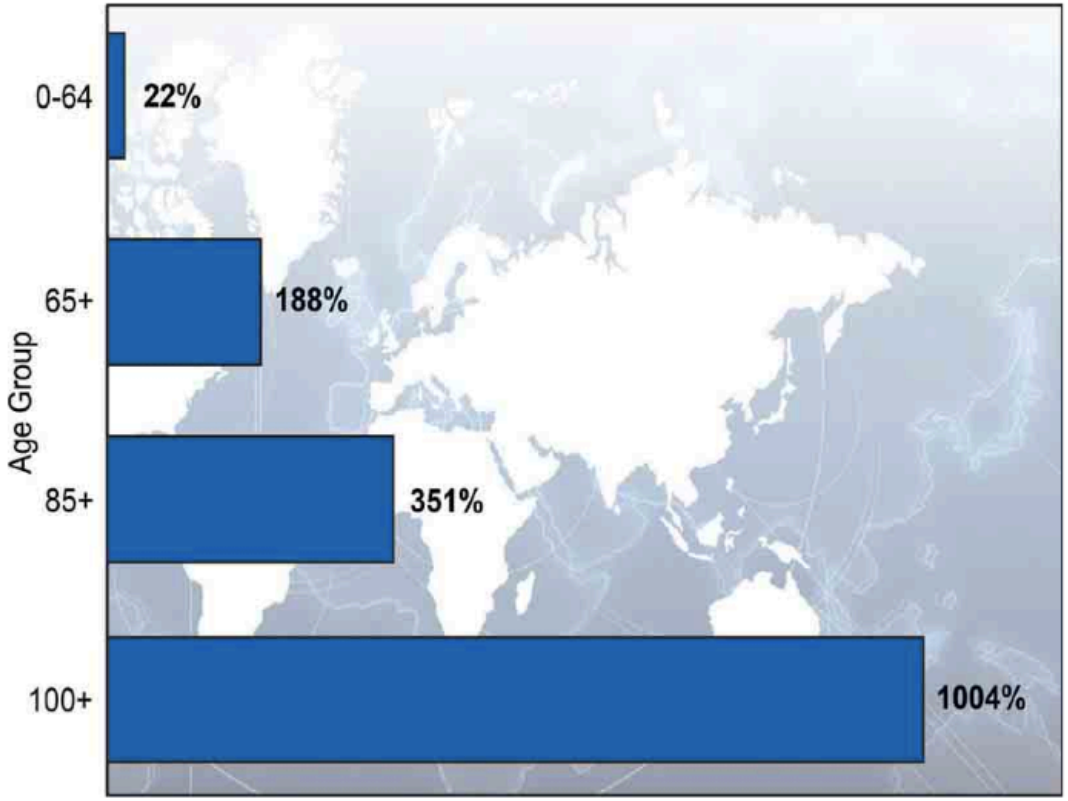
LIFE EXPECTANCY



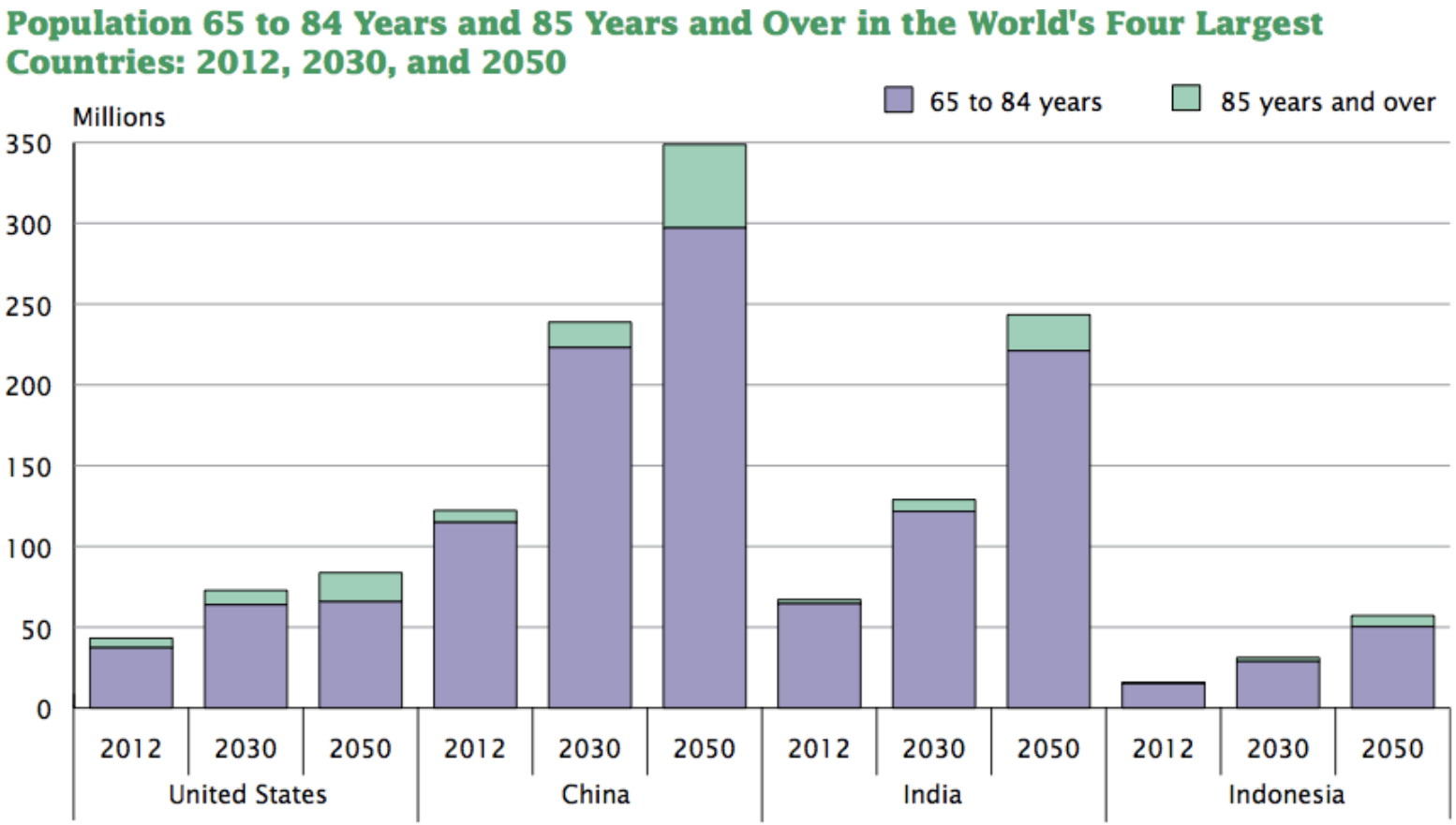
RACIAL AND ETHNIC COMPOSITION



PERCENT CHANGE IN WORLD'S POPULATION BY AGE: 2010-2050

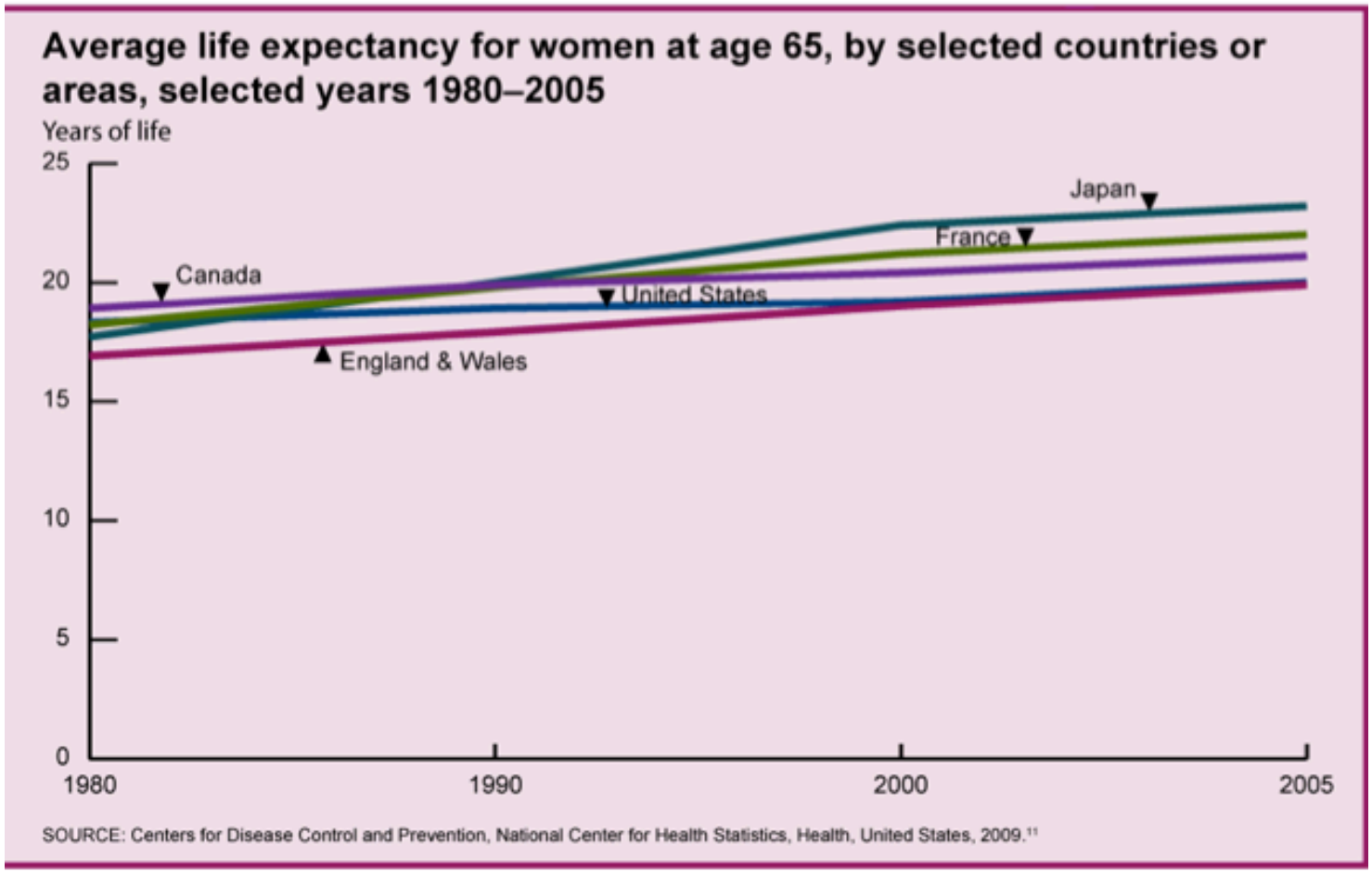


GLOBAL COMPARISONS

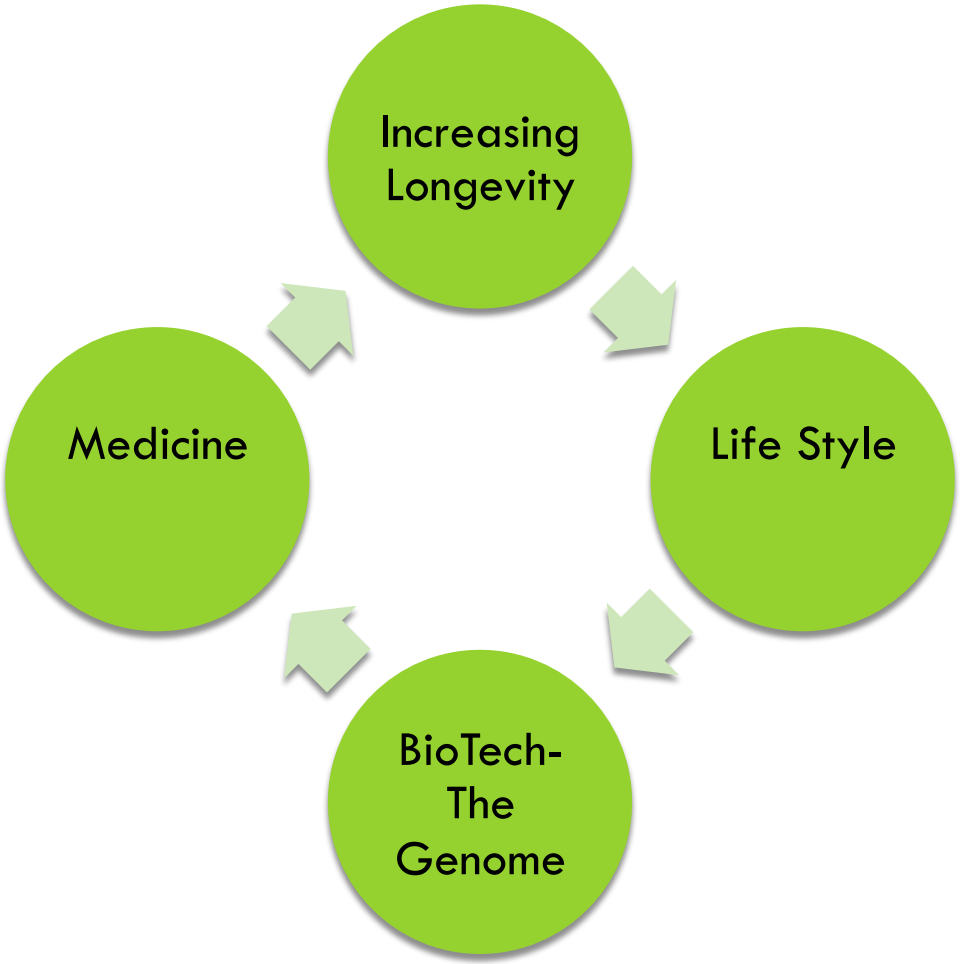


Source: U.S. Census Bureau, 2012 Population Estimates, 2012 National Projections, and International Data Base.

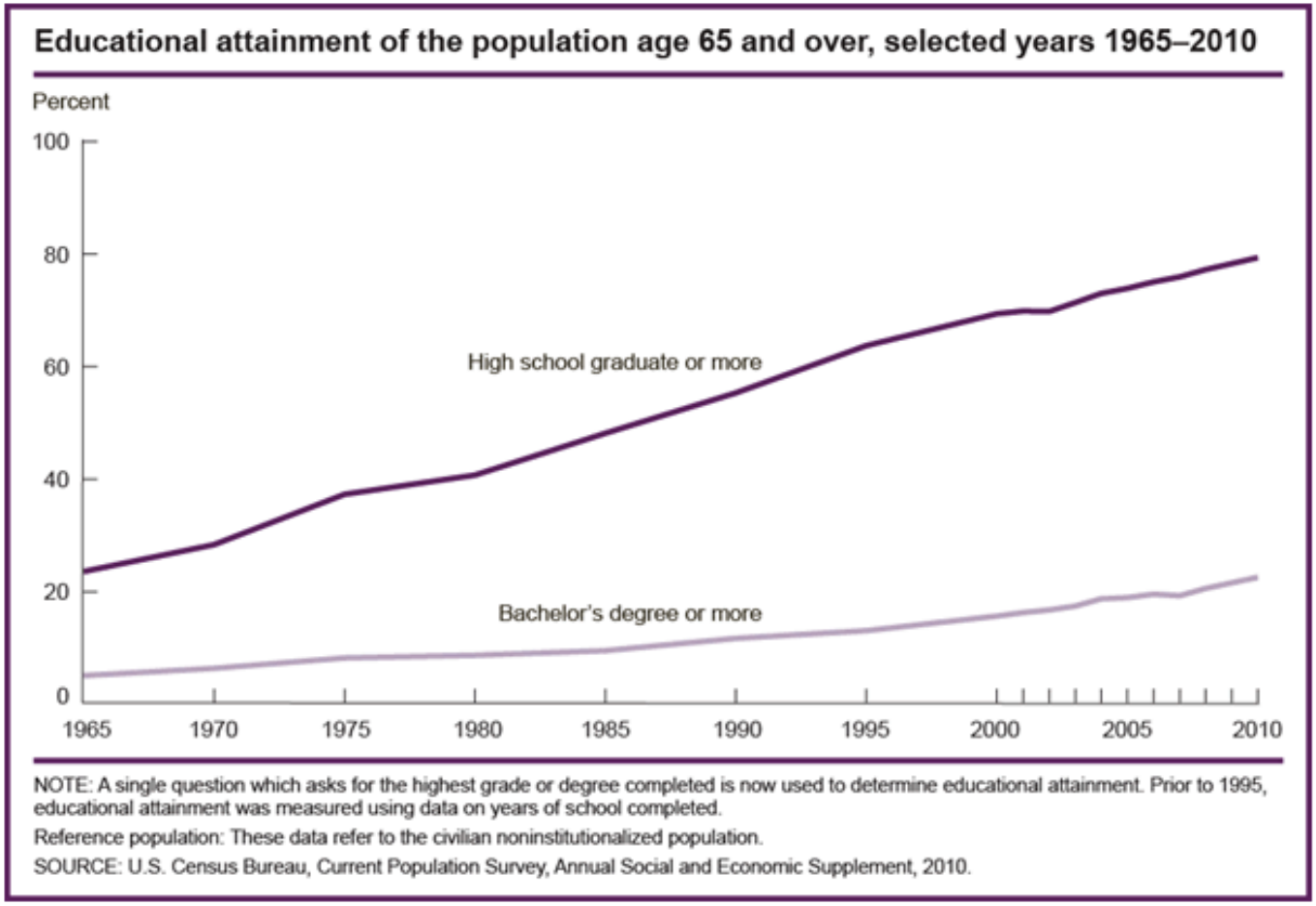
LIFE EXPECTANCY BY COUNTRY

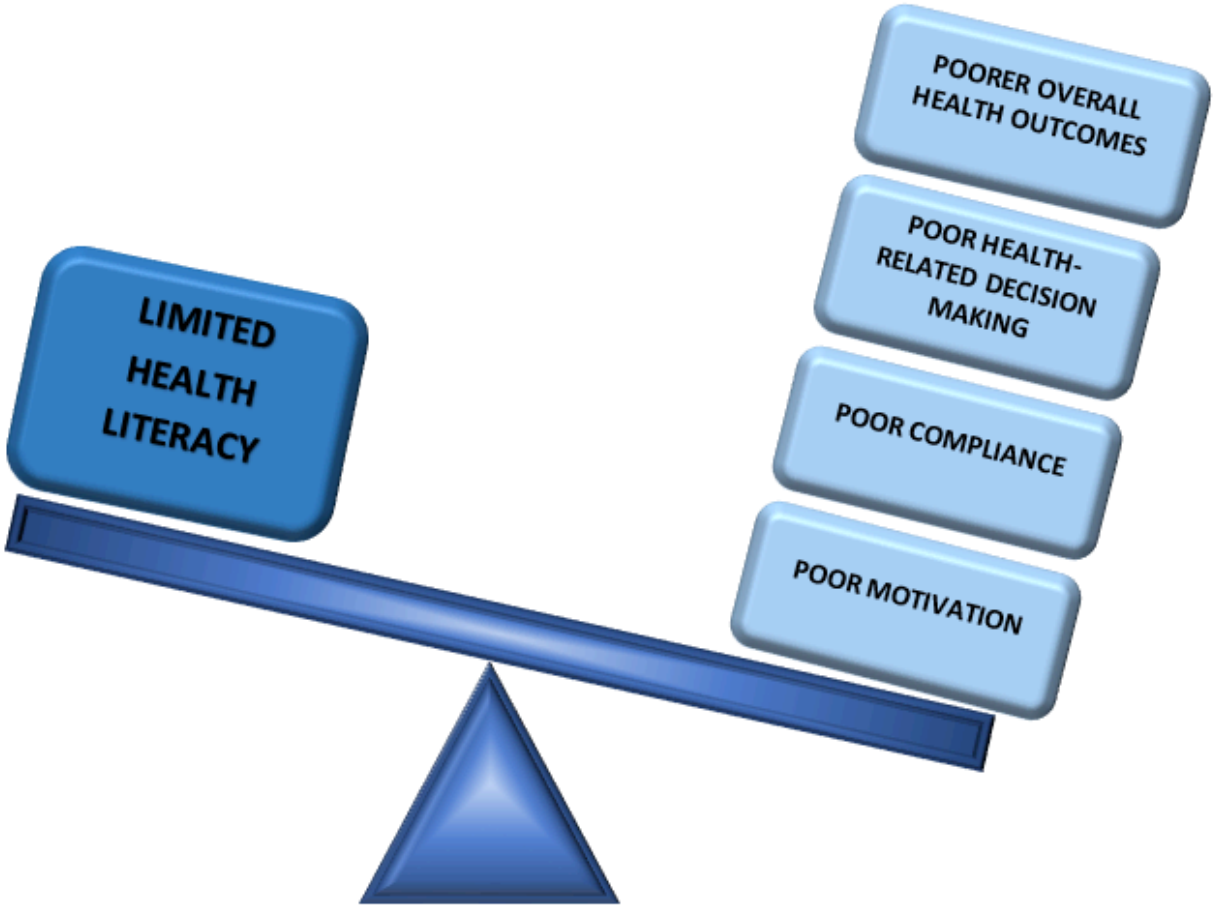


FORCES INFLUENCING POPULATION DYNAMICS



EDUCATIONAL ATTAINMENT




LIMITED HEALTH LITERACY
POORER OVERALL HEALTH OUTCOMES
POOR HEALTH-RELATED DECISION MAKING
POOR COMPLIANCE
POOR MOTIVATION

HEALTH LITERACY AND HEARING STATUS (CUTILLI, 2015)*

- Older adults with lower health literacy have low self rated health and have visual or hearing difficulties
- They use health care providers with less frequency, as well

*National Assessment of Adult Literacy – National assessment of relation between health literacy and demographic factors among older adults

CHRONIC CONDITIONS

A CONDITION THAT LASTS AT LEAST A YEAR OR MORE AND REQUIRES ONGOING MEDICAL ATTENTION AND/OR LIMITS ACTIVITIES OF DAILY LIVING

- ARTHRITIS, CANCER, MENTAL AND COGNITIVE DISORDERS

MULTIMORBIDITY

The most common chronic condition in older adults is multimorbidity

increases risk of mortality, functional decline, and adversely impacts quality of life

CHRONIC DISEASE AND AGING

- MORE THAN 70 MILLION OLDER ADULTS HAVE ONE CHRONIC CONDITION
  - 92% HAVE AT LEAST ONE
  - 77% AT LEAST TWO
  - 12% HAVE 6 OR MORE

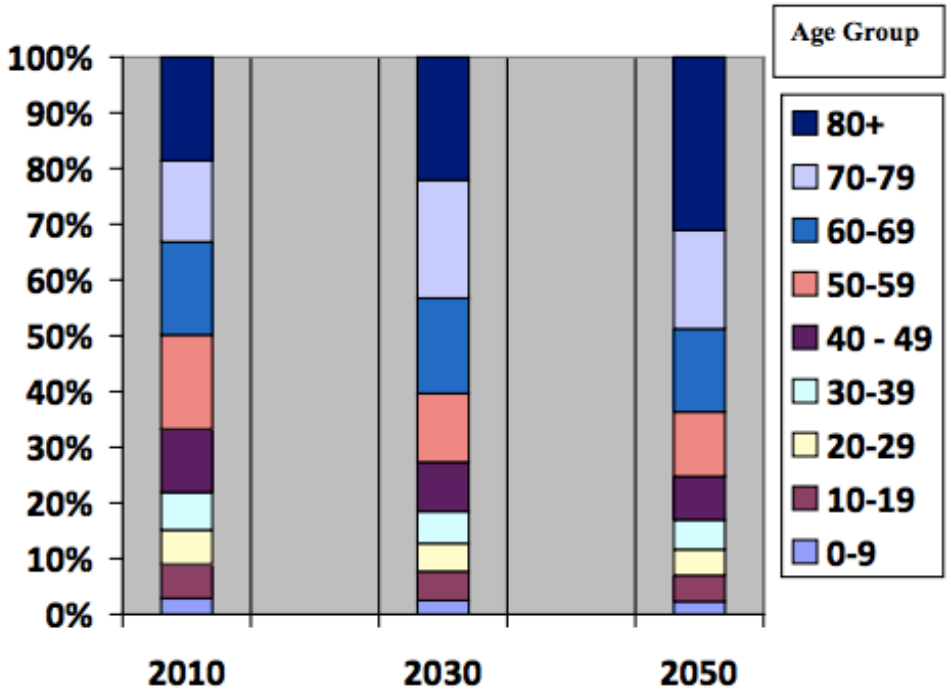
FUNCTIONAL DISABILITIES

- ADL Measures - involve self care, such as walking, eating, bathing, dressing, toileting, transferring, walking,

- IADL Measures - tasks that support an independent lifestyle such as using telephone, shopping, managing medications, cooking, housework

DISABILITY AND AGING

Estimated Proportion of US Population with Disabilities by Age Groupings in 2010, 2030, and 2050*



DISABILITY AND HEARING LOSS (GOPINATH, SCHNEDIER, McMAHON, ET AL., 2012)

- N=1572; HI 44%, 75% HH, 77 years; Normal-70 years
- Functional Status Diminished Among Those with HI
  - IADLS more problematic – walking, shopping, housework
  - Persons with moderate to severe hearing loss – three times as likely to report difficulties with ADLs; persons under 75 years at greatest risk
  - Hearing aid users more likely to report impaired ADLs

*INDEPENDENT RELATION BETWEEN SEVERITY OF HEARING LOSS AND FUNCTIONAL DISABILITY

IADLS THAN ADLS

DECREASING AGE EFFECT

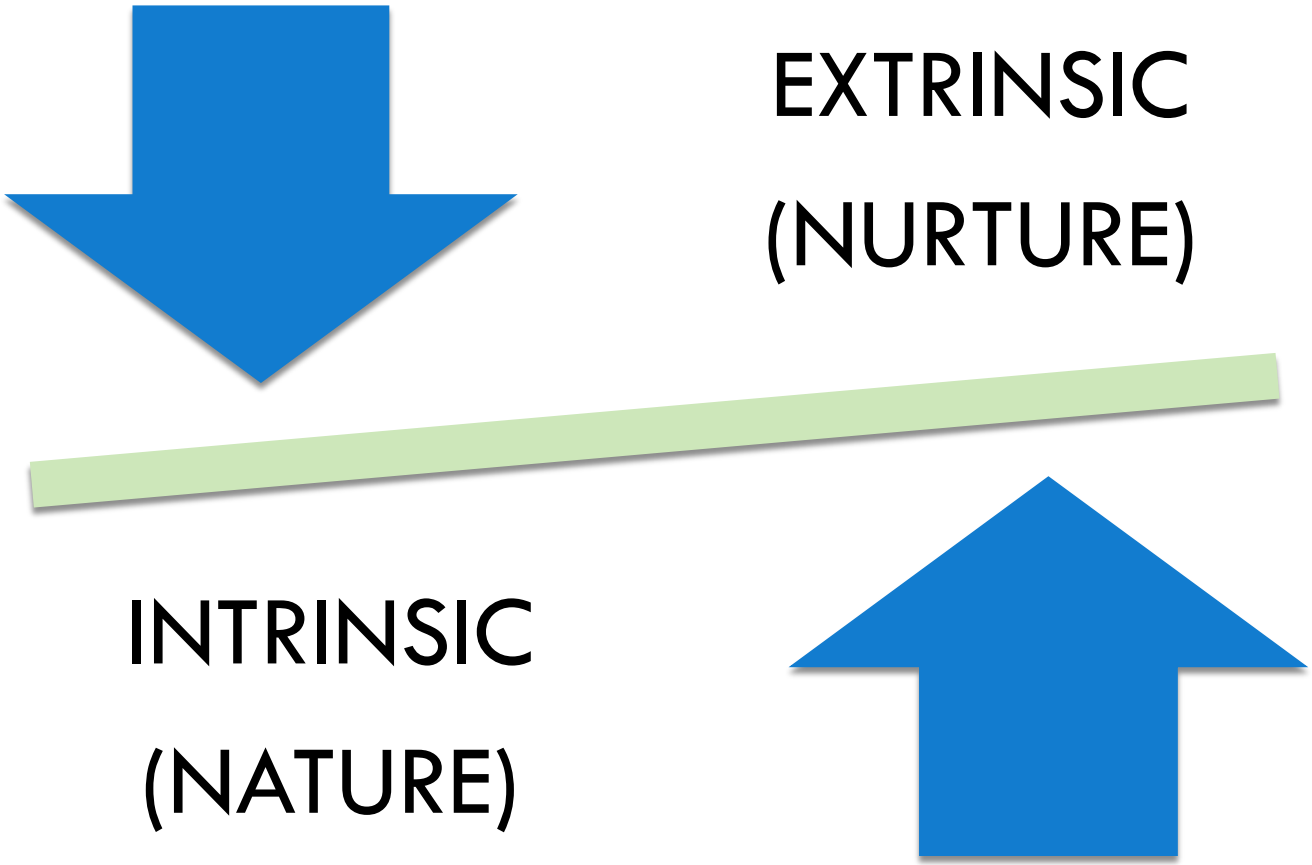
DISABILITY AND COGNITIVE DECLINE(RAJAN, ET AL., 2012)

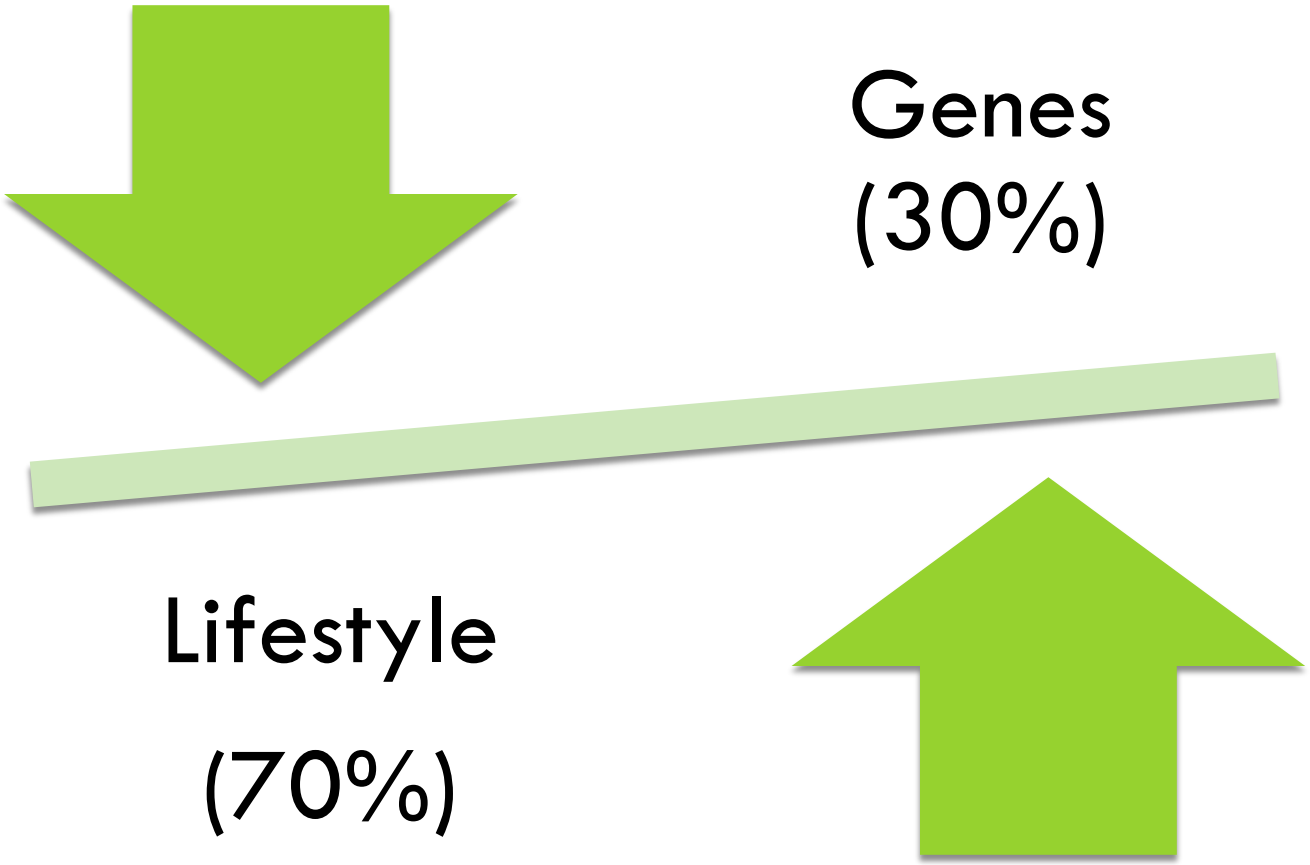
- COGNITIVE FUNCTION DECLINED DRAMATICALLY FOLLOWING FUNCTIONAL DISABILITY ONSET
  - BY 158% AFTER ONSET OF ADL DISABILITY
  - BY 115% AFTER ONSET OF IADL DISABILITY

REALITIES OF AGING (KIRKWOOD, 2009)

- NOT A DISEASE
- A biologic, universal and variable process
- Organ systems within individuals age at different rates
- Considerable variability in how aging affects individuals
- Characterized by a decline in the ability to respond to stress

RATE AT WHICH WE AGE




Genes
(30%)
Lifestyle
(70%)

HEALTHY AGING

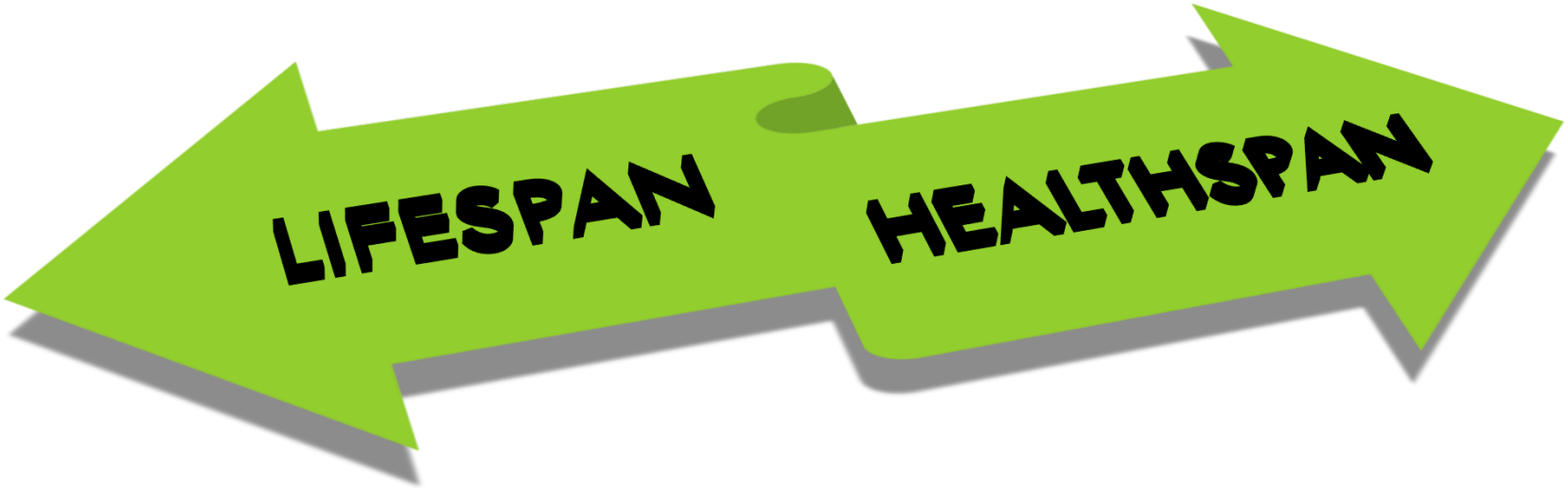
GETTING OLDER HAS MANY ADVANTAGES. I'M STILL AS IMPERFECT AS EVER, BUT I NO LONGER CARE.

HEALTHY AGING (WHO, 2002)

Development and maintenance of optimal, physical, social, mental, and functional well being

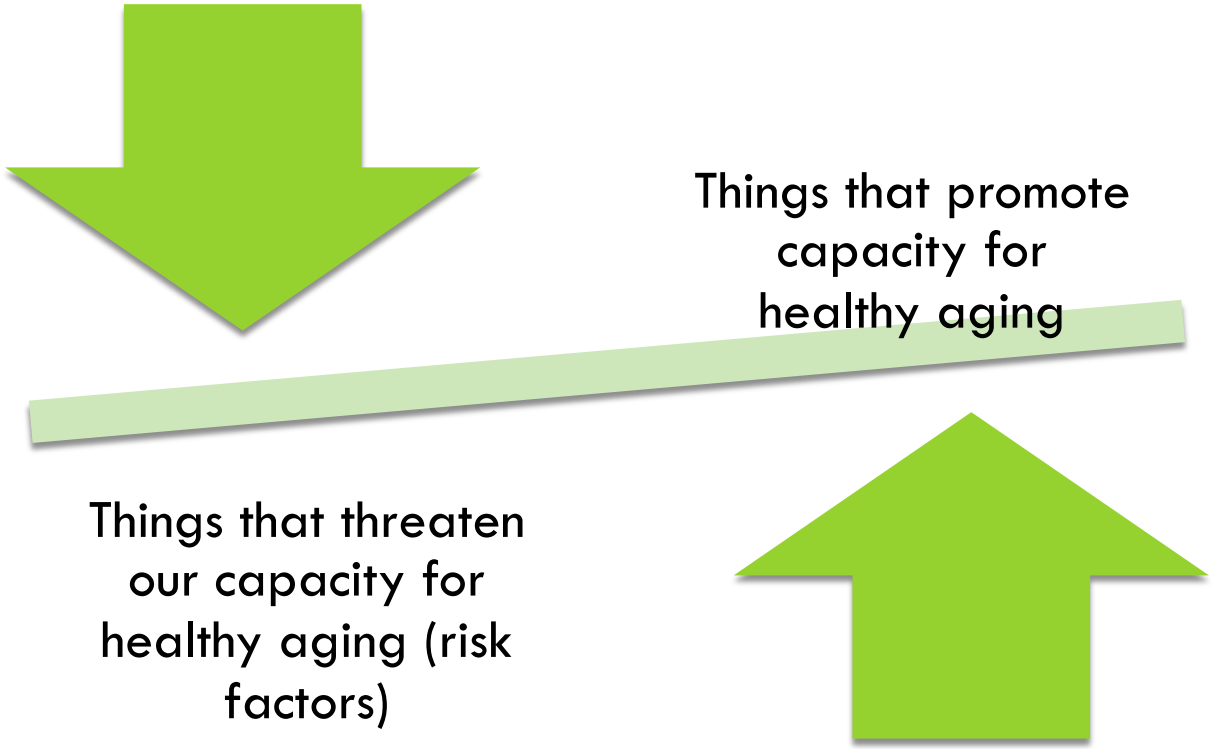
Optimize opportunities for health, participation and security in order to enhance quality of life

HEALTHY AGING

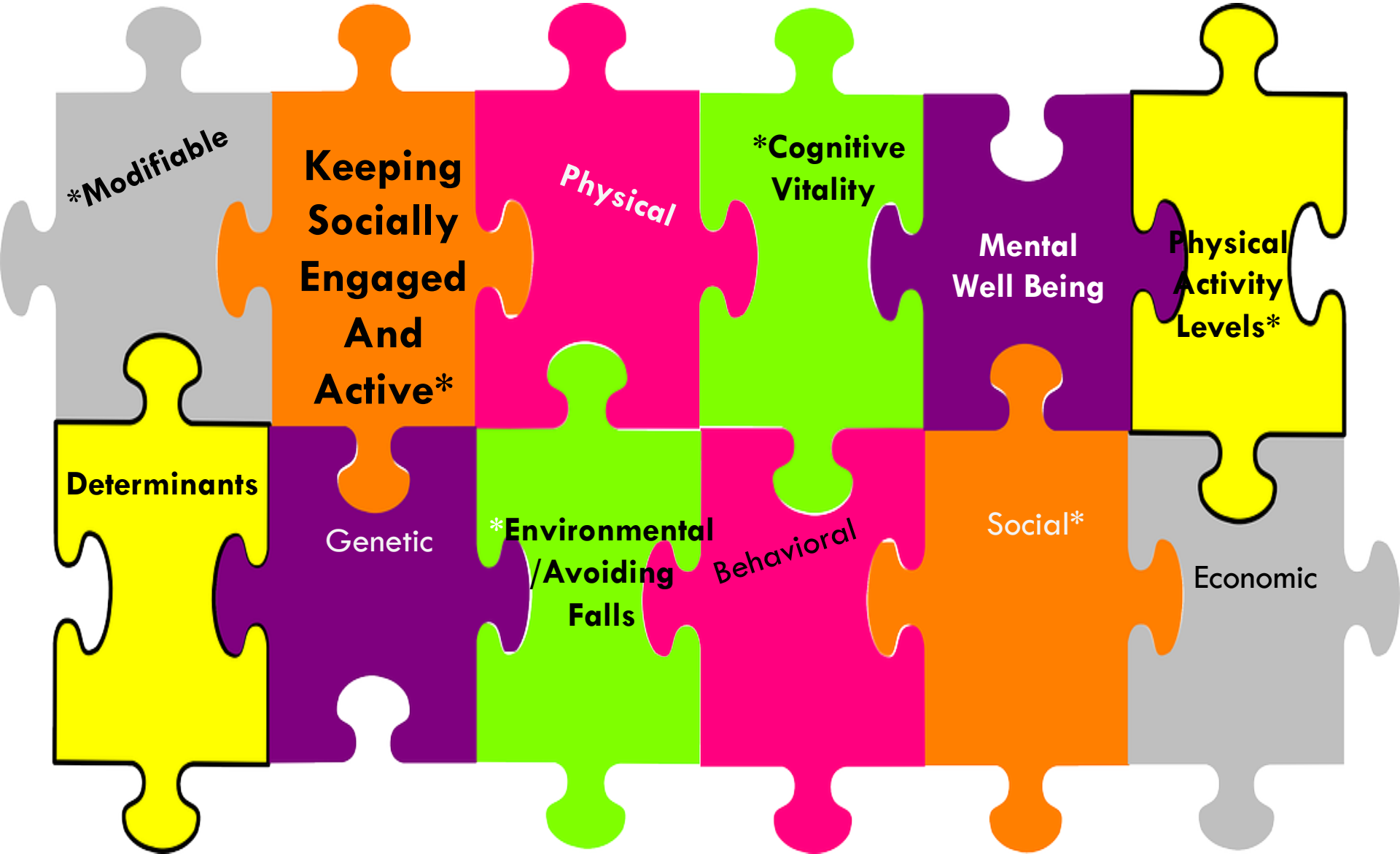


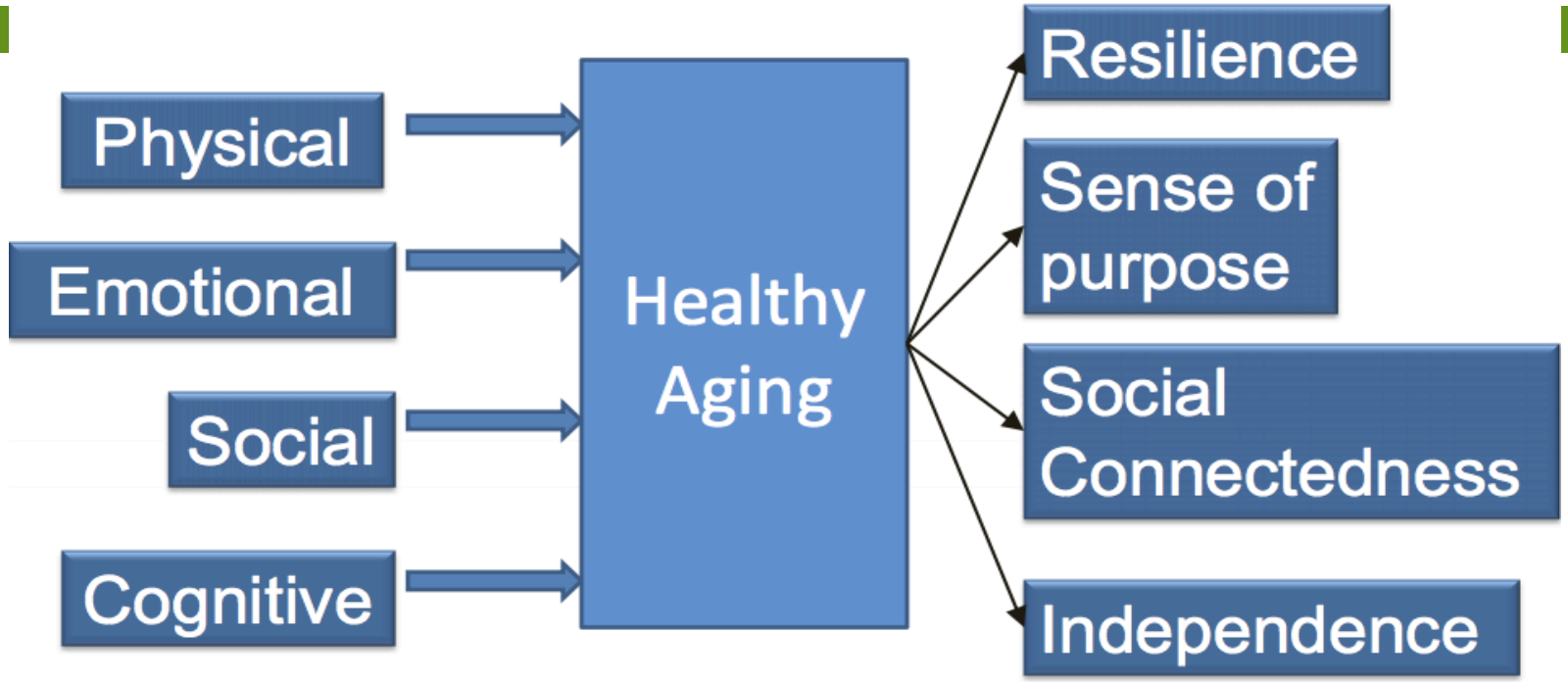
- Lifespan – the average length of life in years
  - it is about living longer

- Healthspan – the period in years of one's life that are spent in good health
  - living better
  - more healthy years, fewer sick years


Things that promote capacity for healthy aging
Things that threaten our capacity for healthy aging (risk factors)

HEALTHY/ACTIVE AGING



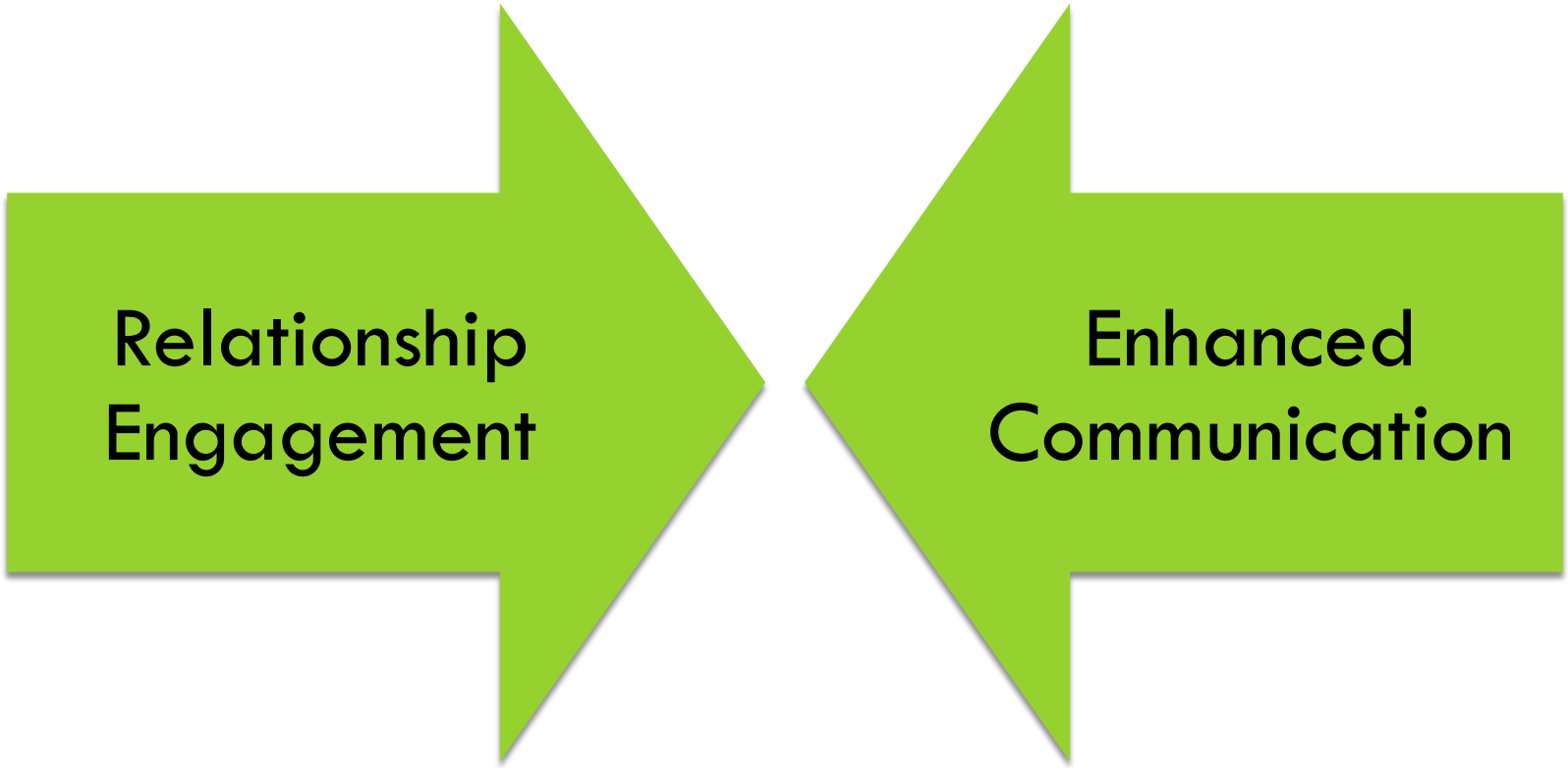

Physical
Emotional
Social
Cognitive
Healthy Aging
Resilience
Sense of purpose
Social Connectedness
Independence

(SLIWINSKI)

SOCIAL REALITIES

- Social interaction needs continue to be as important, if not more so, as we age

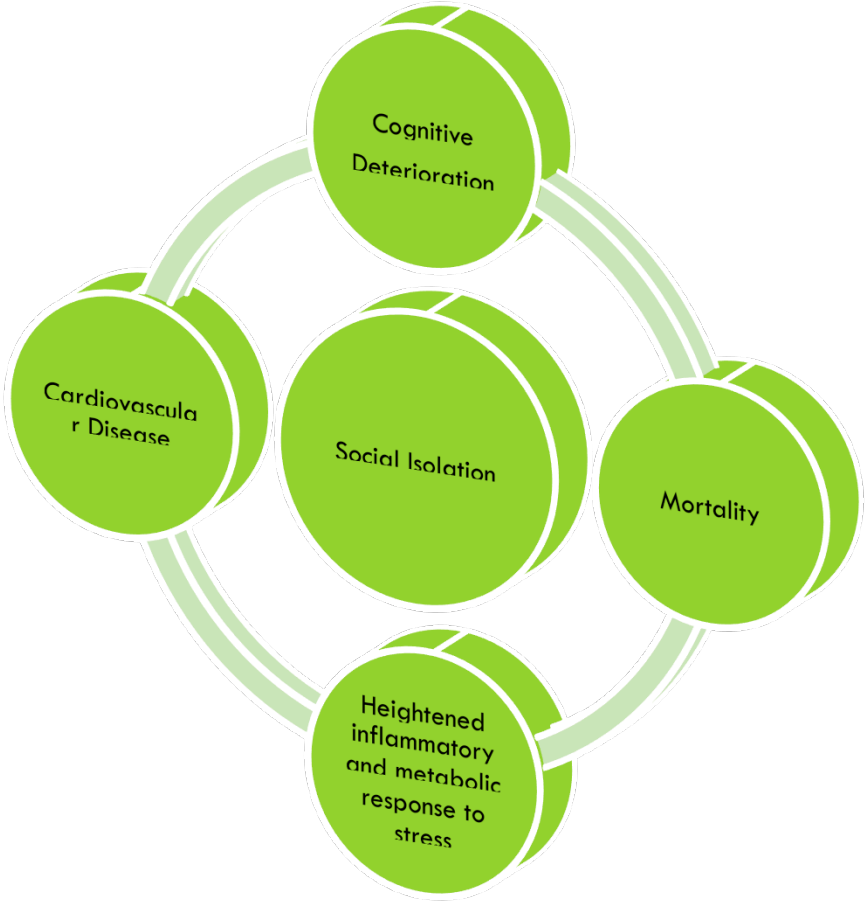
- The **most important** influence on whether one experiences a good, rather than bad, quality of life in old age is **quality** of **social relationships, having social roles and activities in which to engage**


Relationship Engagement
Enhanced Communication

VALUE OF SOCIAL ENGAGEMENT

VALUE OF SOCIAL ENGAGEMENT

SOCIALLY ISOLATED INDIVIDUALS ARE AT RISK



(Steptoe, Shankar, Demakakos, & Wardle, 2013)

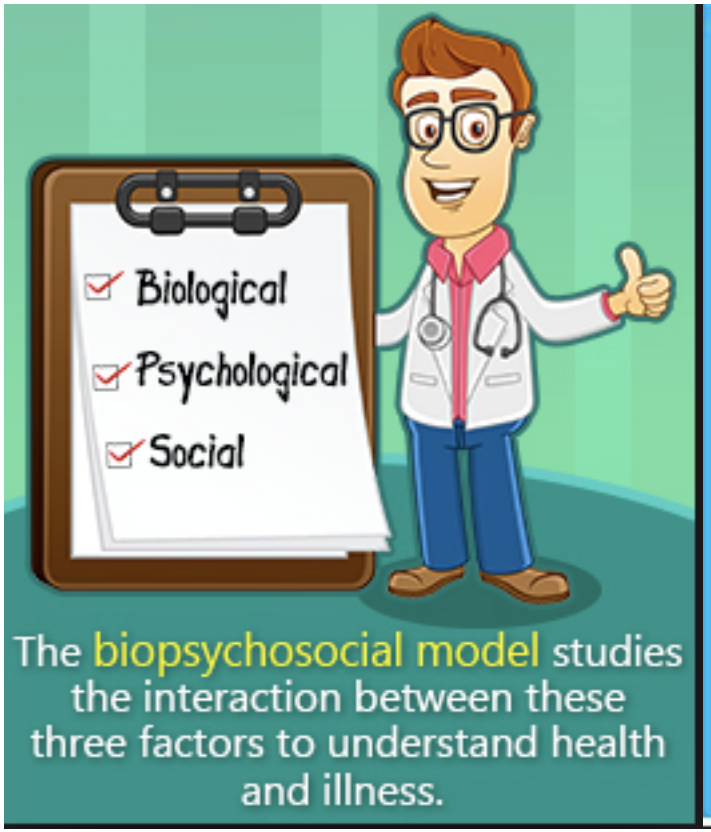
SOCIAL DETERMINANTS OF HEALTH

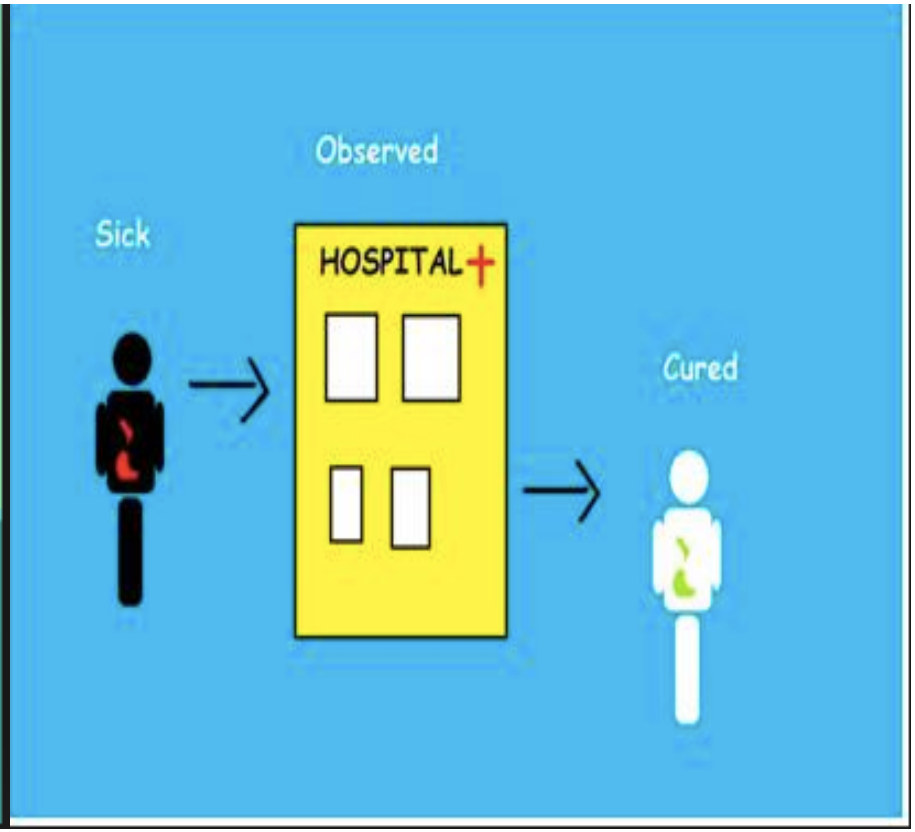
- A direct link between social connectedness, mental and physical health outcomes
- People with stronger social relationships have a 50 % increased likelihood of survival than those without social ties (comparable with the well-established risk factors of smoking and alcohol abuse)
- Poor mental health and sensory impairments - associated with smaller and less satisfying support networks
- Lower levels of contact with social networks and loneliness increase risk of cognitive decline and dementia
- Frequent emotional support and social activity reduce risk of cognitive decline

- As the elderly begin to experience declines in their physical and sensory capabilities, they will demand—and respond to products and services that help them maintain their active lifestyles and activities

- Flexible scheduling, continuing education, travel, intellectual and stimulating experiences, and opportunities for companionship assume greater importance

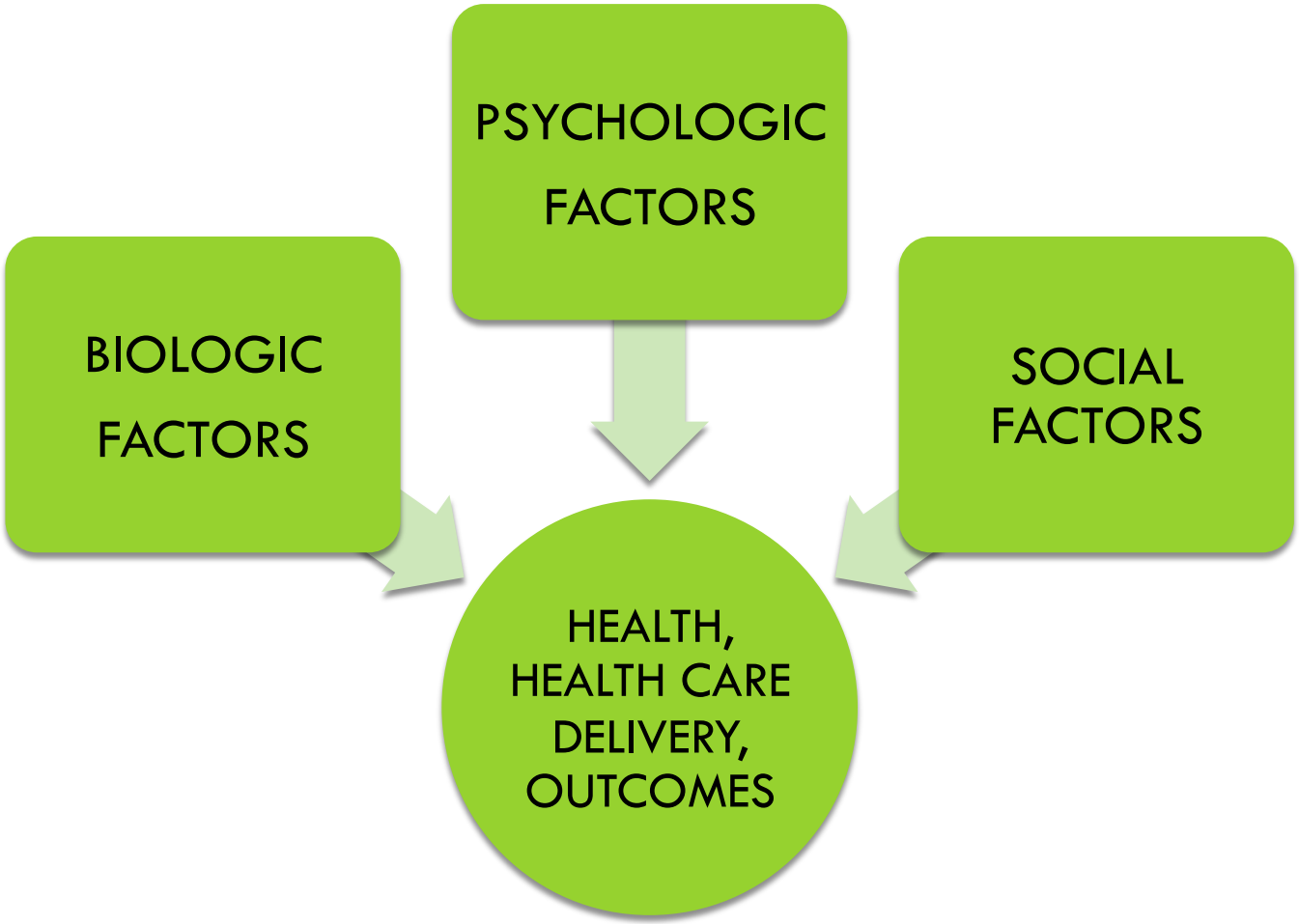
APPROACHES TO MANAGEMENT



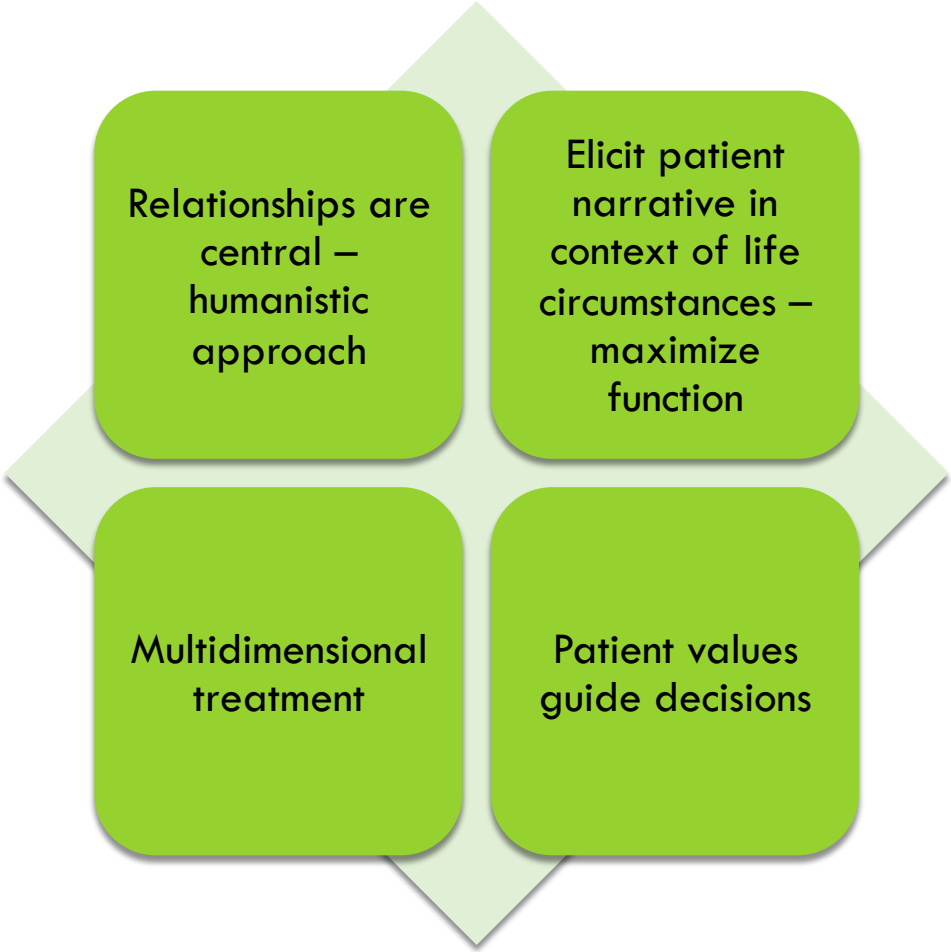


BIOMEDICAL
Focus on Pathophysiology and Biological

BIOPSYCHOSOCIAL
Emphasis on human health and illness in context


PSYCHOLOGIC FACTORS
BIOLOGIC FACTORS
SOCIAL FACTORS
HEALTH, HEALTH CARE DELIVERY, OUTCOMES

INGREDIENTS FOR CLINICAL PRACTICE



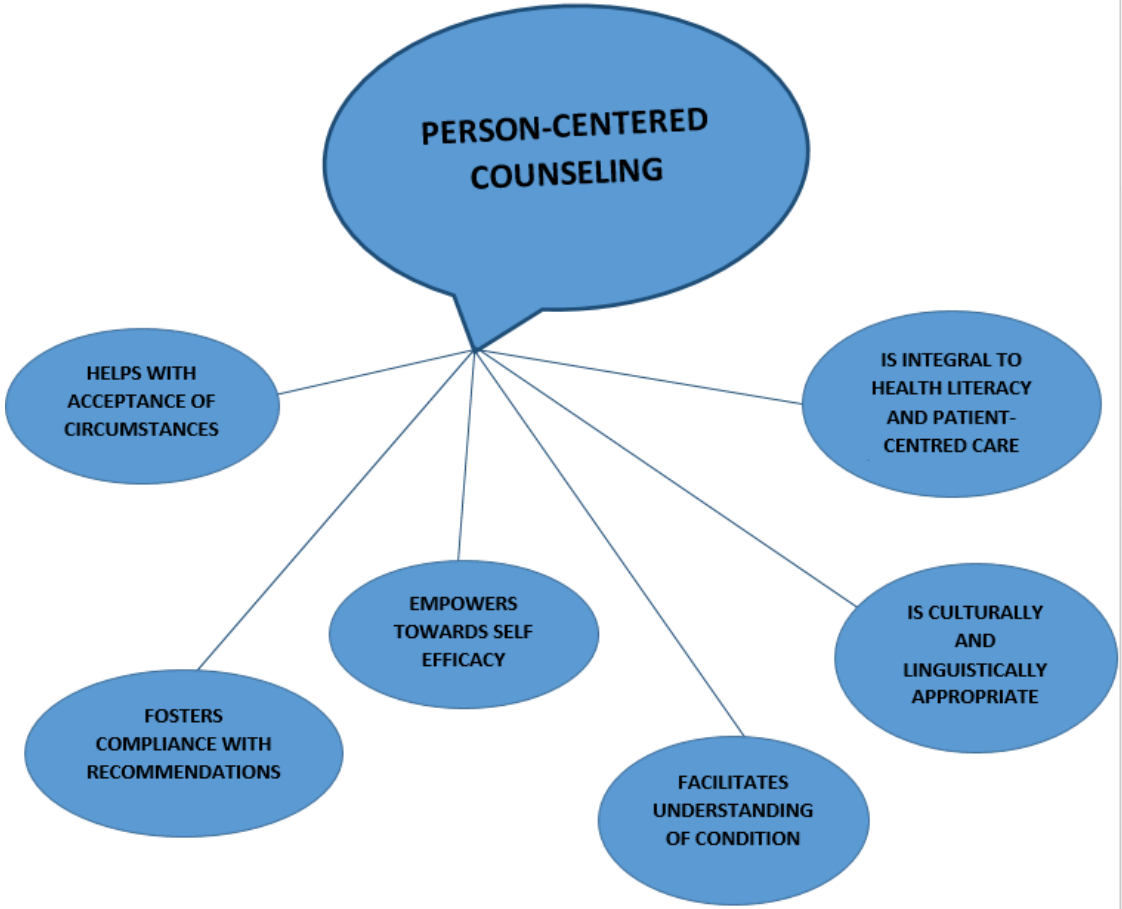
BIOPSYCHOSOCIAL MODEL

- Horizontal communication
- Facilitative
- Person-centered
- Patient needs dictate
- Empowering, Self actualizing
- Present calm, prepared and pleasant appearance
- Arrange chairs so patient can choose seat

PERSON CENTERED CARE(Laplante-Levesque, HICKSON, & GRENNESS, 2014)

- Care that is individualized and respects patient and family preferences and balances the burden of therapies with potential benefits
- Focus on function and quality of life concerns
- Elicit patient perspective
- Therapeutic alliance
- Clinician as person with humanistic traits

PERSOSN CENTERED CARE IS A PRIORITY



GRENNESS, ET AL.(2015)

- More than 75% of the educational and counseling time revolved around discussion of hearing aids; rapid movement from talk about test results to discussion of hearing aid options
- Little time spent on patient's psychosocial concerns, rarely engaged in affective communication
- Patients had little involvement in management planning process

PRINCIPLES OF GERIATRICCARE

MULTIDISCIPLINARY

PRIMACY OF FAMILY

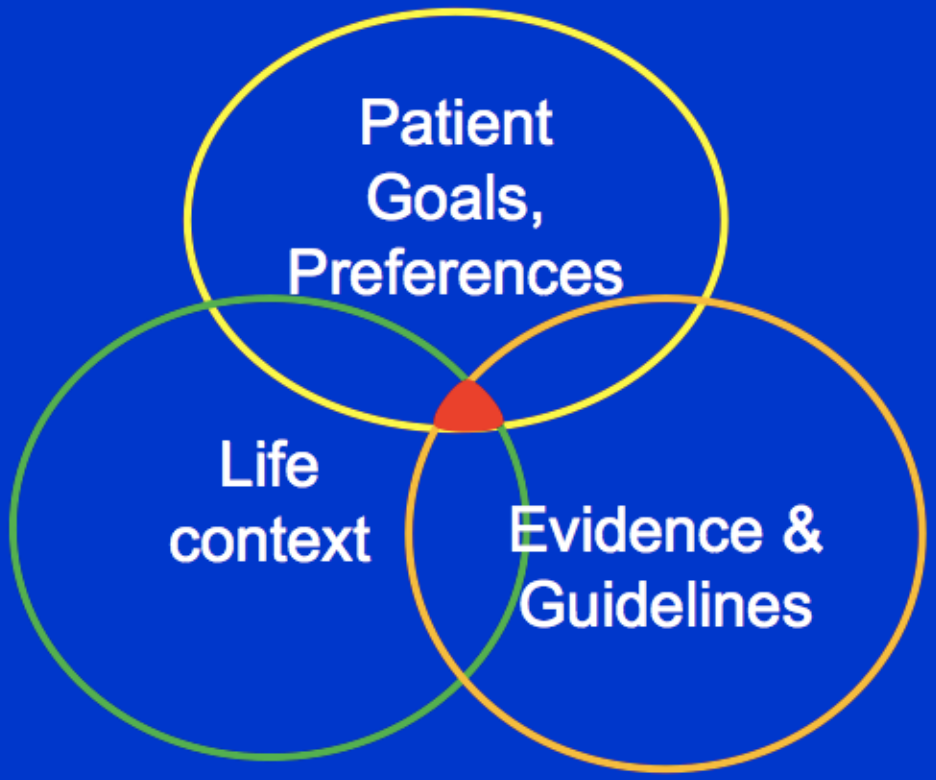
QUALITY OF
LIFE AND FUNCTION

PROVIDER – PATIENT
RELATIONSHIP - PCC

PATIENT PREFERENCES

PATIENT REPORTED
OUTCOMES

DECISION MAKING FOR OLDER ADULTS



K. Stange et al. AnnFamMed, 2014

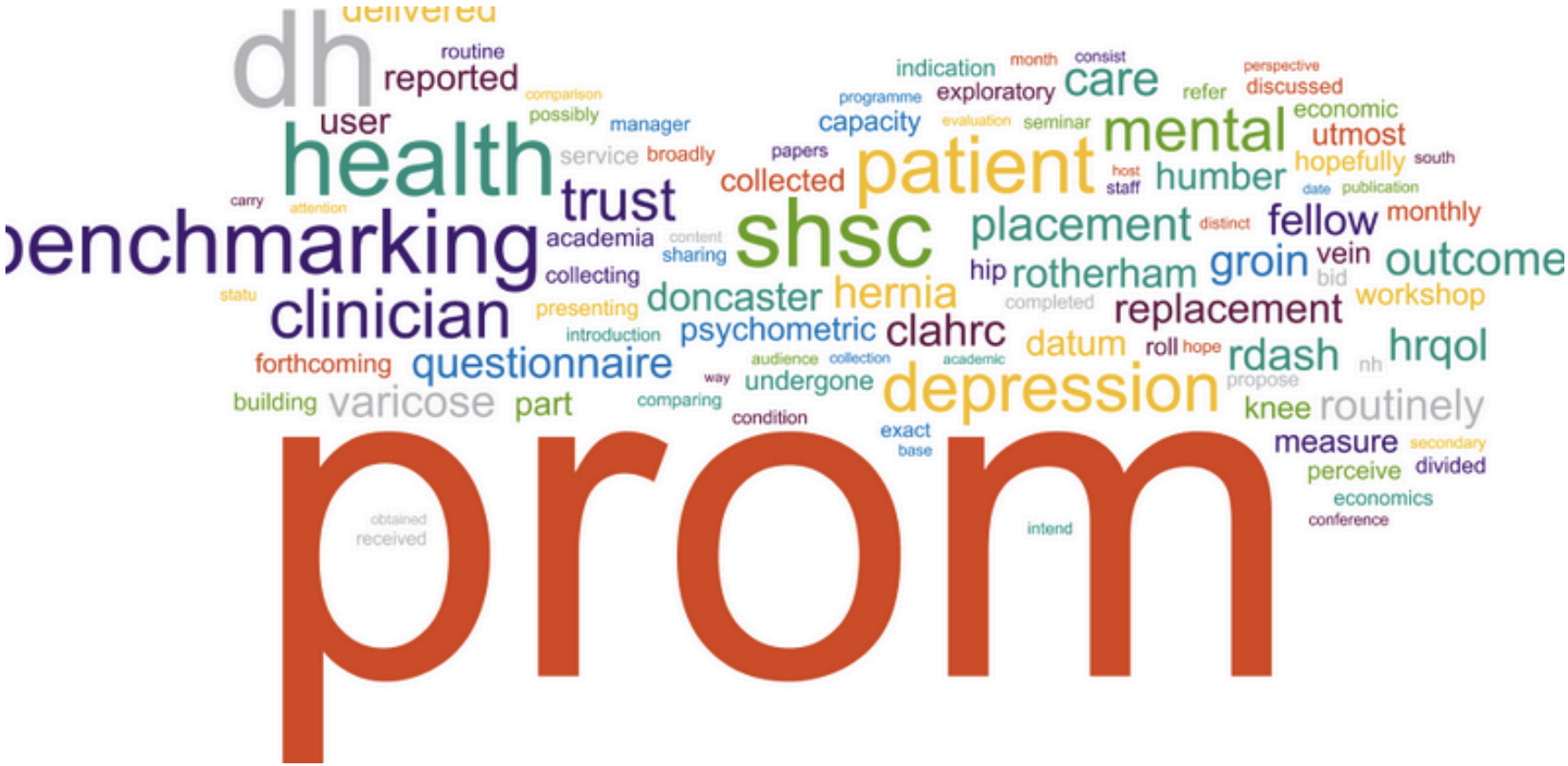
DECISION MAKING PRIORITIES

- PATIENT PREFERENCES ESSENTIAL TO MEDICAL DECISION MAKING AND OUTCOMES
  - EFFECTS OF TREATMENTS AND INTERVENTIONS ON DAILY FUNCTION
- ABSOLUTE RISK REDUCTION
- PROGNOSIS - TIME HORIZON TO BENEFIT
- EVIDENCE BASE
- SUSTAINABLE

PATIENT PREFERENCES - HEALTH OUTCOME GOALS (TINETTI, 2015)

- Patient & caregiver understand conditions and trajectories
- Specific, measurable, actionable, reliable, and time bound (SMART) goals
- What individual considers a bad or unacceptable outcome
- Reassess periodically

PATIENT REPORTED OUTCOMES (PROMs)



SHARED DECISION MAKING

"Whoa—way too much information!"

- “... any report of the status of a patient's health condition that comes directly from the patient, without interpretation of the patient's response by a clinician or anyone else." (NQF)
- “ ... reports coming directly from patients about how they feel or function in relation to a health condition and its therapy...”(Cochrane)
- Universal health outcomes: “... reflect the important clinical effects of chronic conditions and their treatments...” (Tinetti et al. JAGS 2011)

PROMs AT POINT OF CARE

- Facilitate shared decision making
- Monitor treatment across conditions
- Engage patients in prioritizing competing demands
- Symptom-based screening
- Potential metric for treatment decisions
- Simplify treatment approaches for both patients and clinicians

CHARACTERISTICS OF PROMs

- • Person Centered
  • Engage patients
  • Useful for shared decision making
- • Meaningful
  • Relevant to patients' perspective
  • Reflect QOL domains

VALUE OF PROMs

- Critical to assessing whether clinicians are improving the health of patients
- "Attempt" to capture whether the services provided actually improve patients' health and sense of well-being

]

- Quantifiable and psychometrically valid
- Valid
- Reliable
- Implementable
- Can be systematically collected, used, stored
- Valid across conditions and morbidity burden

PROMs

- • General health status – self reported
  ‘Would you say your health is excellent, very good, good, fair, poor?’
- • Functional status
  ADL, IADL, physical function summary scores
- • Emotional well being
  • Depression
  • Activity levels
  • Self rated health

Immedate Outcomes
Improved speech understanding in noise
Improved patient centered communication during hearing health care encounter
Ease of listening enhanced
Reduced self reported hearing handicap
Social engagement increased
Reduced loneliness/ subjective social isolation
Communicating in a Patient Centered Fashion
Intermediate Outcomes
Increased patient self efficacy
Improved physician patient communication
Fewer depressive symptoms
Improved cognitive status
Improved self rated health
Reduction in falls
Reduced caregiver burden
Co-morbidity reductions
Health Outcomes
Improved transitions in care
Reduced health care expenditures
Improved quality of life and well being
Improved biologic outcomes
Improved adherence
Improved ratings of health care
Reduced repeat hospitalizations

SHARED DECISION MAKING

- COLLABORATIVE PROCESS
- ALLOWS PATIENT AND PROVIDER TO MAKE DECISIONS TOGETHER TAKING INTO ACCOUNT
  - EVIDENCE
  - PATIENTS VALUES AND PREFERENCES

SHARED DECISION MAKING FRAMEWORK (YUEN, ET AL., 2015)

- Assess patient's readiness and motivate patient to engage in SDM
- Clarify health status, prognosis/disease trajectory
- Elicit patient's values and goals
- Make recommendation that aligns with patient's values and goals
- Modify approach based on stage of illness

PATIENT DECISION AIDS (PDAs) (COX, 2014)

- A visual tool that helps organize and systemize a set of options
- Facilitates decision making regarding a treatment plan

GOALS OF DECISION AIDS
(MCCAFFERY ET. AL. 2012)

Support patients in understanding health information relevant to their decision

Help patients determine which factors of this decision matter most to them/ will impact them the most

Increase involvement, improve knowledge and realistic expectations

What is it?	Personal Sound Amplifiers Product (PSAP)	Hearing Aids	Assistive Technology	Communication Strategies	No Treatment
What is involved?	Purchasing a device to sit either in or on my ear to make all sounds louder Using the PSAP in specific listening situations	Being fit with hearing aids (1) Wearing the hearing aids either within my ear or on my ear to help with my hearing problem (1) Obtaining medical clearance if necessary/waiving my right to obtain medical clearance Regularly visiting an audiologist to make changes to my hearing aid as necessary	Purchasing one or more specialized devices to help make sounds louder and make understanding speech easier in some situations. (These devices can work with hearing aids, or on their own)	Becoming a better listener and strengthen my listening skills Utilizing other cues to help me understand and hear better (i.e. visual cues) Learning how to best manipulate my place in the listening environment to enable the best listening environment (3)	Hearing and communicating as you are now
Options I want to know more about?	☐	☐	☐	☐	☐
Options I will think about	☐	☐	☐	☐	☐

Listening to Television With a Hearing Loss:
TV Device or Hearing Aids?

An Interactive Decision Aid

Check all statements that apply to you

If you like a statement, check ✓ the box

If you dislike a statement place an ✗ in the box

My hearing problem causes arguments with family members. The TV is too loud!

I have difficulty understanding dialog, especially fast talkers, female talkers or foreign accents.

My difficulty with the TV is affecting my personal and social life. My spouse or other family members can't be in the same room.

I have difficulty when the TV is at normal volume. I can hear it, but cannot understand what is being said.

The speech is too soft but the music is too loud. I can't find the right volume.

A TV device is less costly than hearing aids ☐	Hearing aids are expensive, but they can be used in all situations ☐
No long clinic appointments needed ☐	Usually, 3-4 clinic visits are needed, to fit, fine-tune and troubleshoot hearing aids ☐
A TV device is easy to install, use and maintain ☐	I will have to learn how to use hearing aids; regular cleaning and care are needed ☐
Device only works for TV; other listening situations may still be difficult; indoor use only ☐	Hearing aids are designed to enhance speech understanding; they can be used in all situations ☐
Device overcomes distance and background noise to isolate the TV signal and improve viewing experience ☐	Hearing aids may not solve my TV problem: I might need to buy extra devices that connect hearing aids to the TV ☐
Device does not disturb others; family members can view TV normally ☐	Hearing aids do not disturb others; family members can view TV normally ☐

The more items you checked, the more likely it is that you need help listening to TV

If you feel ready to address the difficulties, your Audiologist can help you to decide on the next step

TV Device	Hearing Aids
Total ✓	Total ✓
Total ✗	Total ✗

Do your responses appear to favor one over the other?
With your audiologist, explore your preferences and dislikes.
Discuss them together to aid your decision

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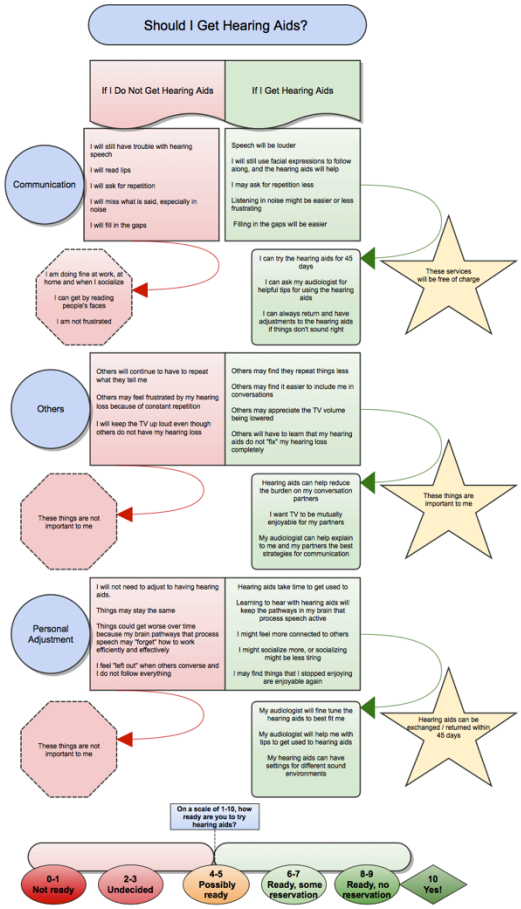
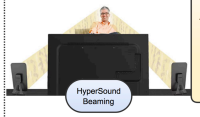
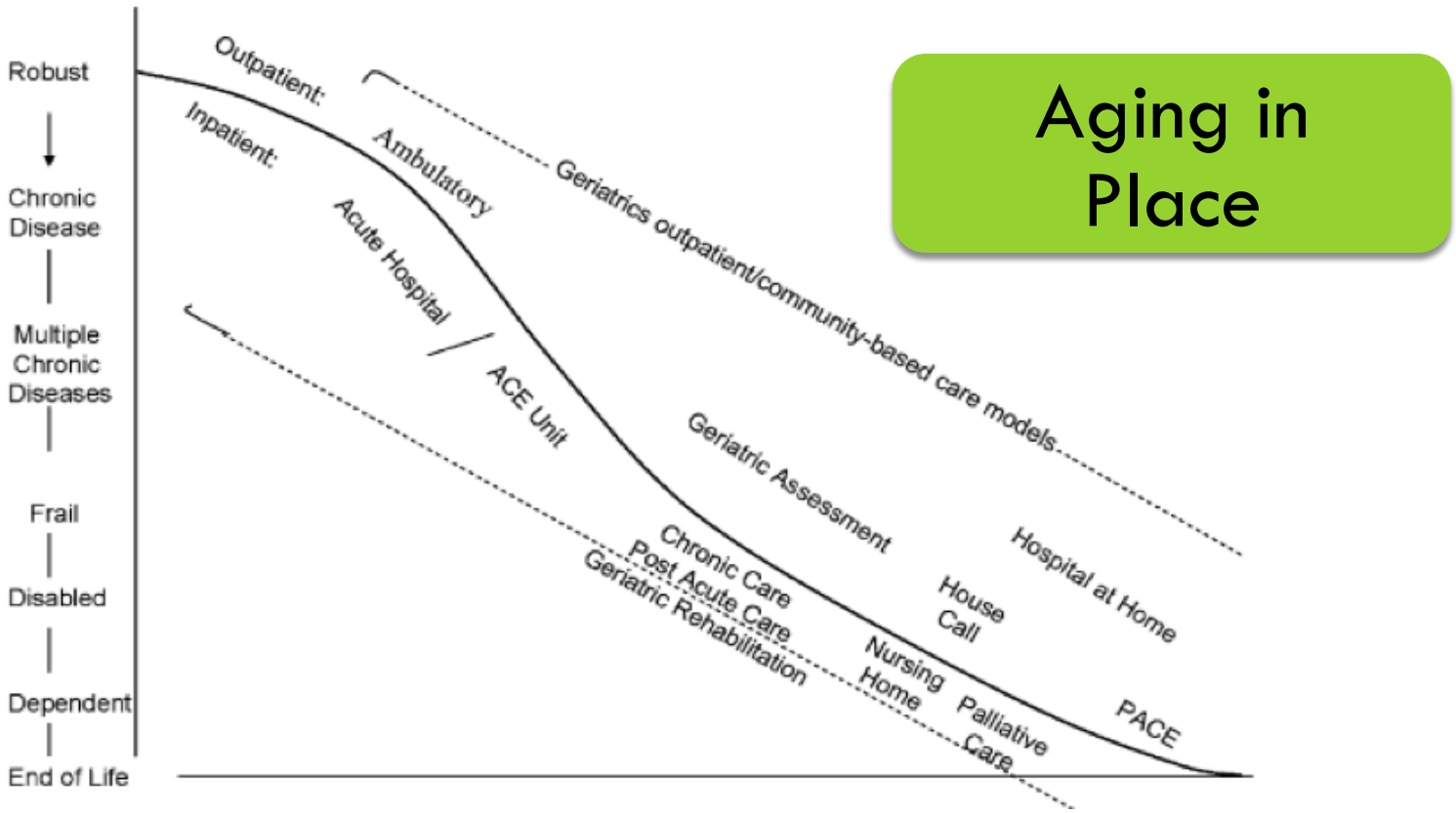

Should I Get Hearing Aids?
If I Do Not Get Hearing Aids
If I Get Hearing Aids
Communication
I will still have trouble with hearing speech
I will read lips
I will ask for repetition
I will miss what is said, especially in noise
I will fill in the gaps
Speech will be louder
I will still use facial expressions to follow along, and the hearing aids will help
I may ask for repetition less
Listening in noise might be easier or less frustrating
Filling in the gaps will be easier
I am doing fine at work, at home and when I socialize
I can get by reading people's faces
I am not frustrated
I can try the hearing aids for 45 days
I can ask my audiologist for helpful tips for using the hearing aids
I can always return and have adjustments to the hearing aids if things don't sound right
These services will be free of charge
Others
Others will continue to have to repeat what they tell me
Others may feel frustrated by my hearing loss because of constant repetition
I will keep the TV up loud even though others do not have my hearing loss
Others may find they repeat things less
Others may find it easier to include me in conversations
Others may appreciate the TV volume being lowered
Others will have to learn that my hearing aids do not "fix" my hearing loss completely
These things are not important to me
Hearing aids can help reduce the burden on my conversation partners
I want TV to be mutually enjoyable for my partners
My audiologist can help explain to me and my partners the best strategies for communication
These things are important to me
Personal Adjustment
I will not need to adjust to having hearing aids.
Things may stay the same
Things could get worse over time because my brain pathways that process speech may "forget" how to work efficiently and effectively
I feel "left out" when others converse and I do not follow everything
Hearing aids take time to get used to
Learning to hear with hearing aids will keep the pathways in my brain that process speech active
I might feel more connected to others
I might socialize more, or socializing might be less tiring
I may find things that I stopped enjoying are enjoyable again
These things are not important to me
My audiologist will fine tune the hearing aids to best fit me
My audiologist will help me with tips to get used to hearing aids
My hearing aids can have settings for different sound environments
Hearing aids can be exchanged / returned within 45 days
On a scale of 1-10, how ready are you to try hearing aids?
0-1 Not ready
2-3 Undecided
4-5 Possibly ready
6-7 Ready, some reservation
8-9 Ready, no reservation
10 Yes!

Options for Listening to TV with a Hearing Loss

Type of device	How it works	Pros & Cons for Me
Pocketalker Amplifier	The microphone unit is placed near the TV speakers. Wired headphones pick up the audio signal, via a long cord. You can adjust the volume and tone of the sound. Uses two AAA batteries (200 hours life).	Very affordable. Overcomes background noise. Does not disturb others. Can be used in other situations. Not wireless. May not work with my hearing loss.
TV Ears	The base unit plugs into the TV and transmits an Infrared wireless signal to earphones. You can adjust the volume and tone of the sound Rechargeable	Affordable. Wireless. Choice of styles. Overcomes background noise Does not disturb others. Reportedly quite delicate. You might get static interference. Need to be in line with TV.
 HyperSound Beaming	A special speaker system emits a focused beam of ultrasonic sound to your seat. Other viewers are not affected. You choose your preferred volume level.	No headphones required. No static interference. Can be programmed to your hearing loss. Fairly costly. Brand new: not a lot of consumer reviews. You have to sit in one place.
Loop Pad	A system that transmits the TV signal into your t-coiled hearing aid or other compatible earpiece using an electromagnetic field. The loop pad goes on or under a seat cushion. You adjust volume and tone.	Affordable. Portable: can be used in other places (e.g. long car rides) You need compatible hearing aids or earpieces. You might get static interference.
Hearing Aid System	The base unit plugs into the TV and sends a signal straight to your hearing aids, or via a neck-worn device. You can adjust the volume either at ear level or via the base unit. Rechargeable.	Designed to work with hearing aids. Programmed to your hearing loss, for increased clarity. Good range: you can sit in different positions. Costly. Can drain hearing aid batteries.

Now that you have seen the choices for TV listening, discuss your preferences with your Audiologist. Together you can reach a decision that meets your personal needs.

THE CONTINUUM OF CARE FOR OLDER ADULTS

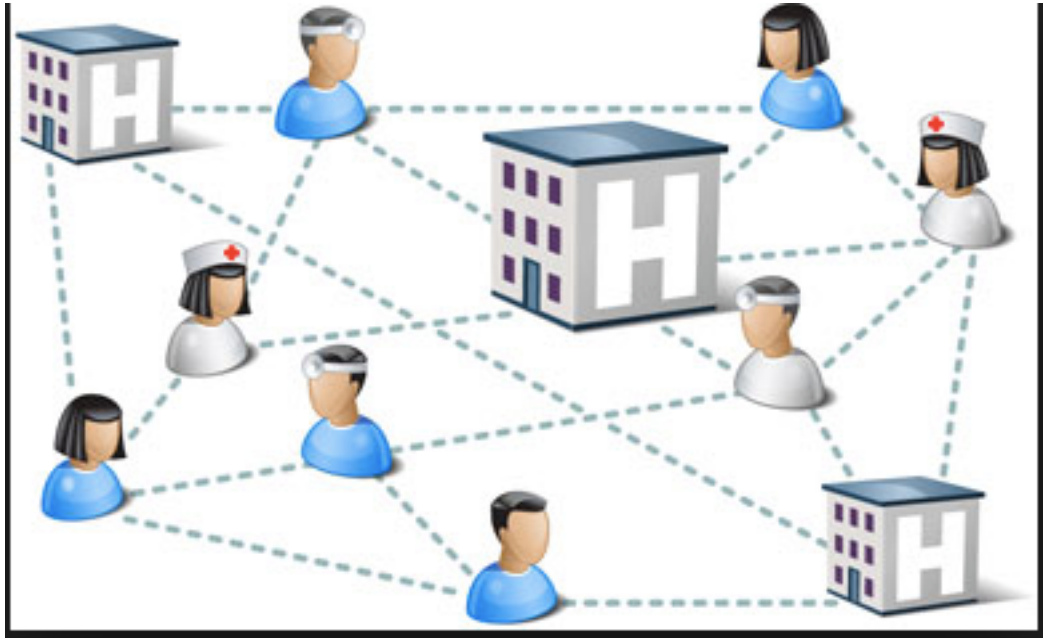


TRANSITIONS IN CARE

- Upon discharge medical adverse event or untoward health outcomes commonplace
  - Medication errors/discrepancy – 1.5 million people annually
  - Adverse events – 49% of patients
  - Confuse follow-up instructions
  - Reduced adherence/compliance
  - Repeat hospitalizations – 19.6% of Medicare beneficiaries readmitted within 30 days; 34% within 90 days

SOLUTION

- Improve communication during transitions between providers, patients and family caregivers;



WHICH PATIENTS MOST SUSCEPTIBLE TO REPEAT HOSPITALIZATIONS

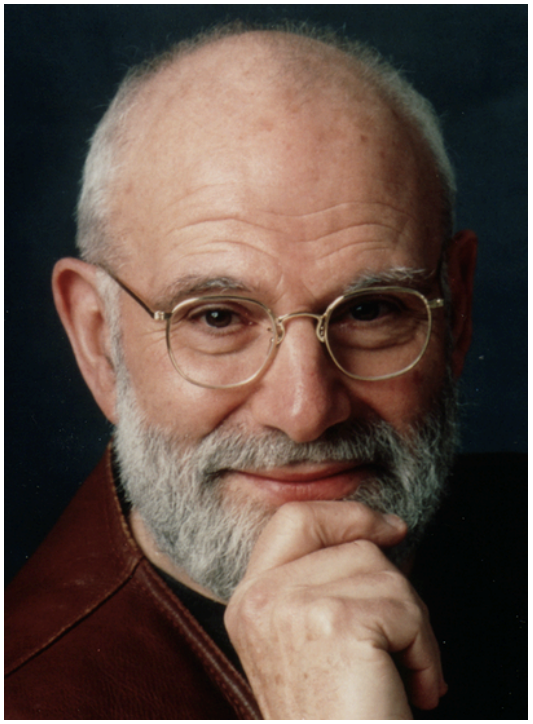
(GENTHER, ET AL., 2013)

70>/=

INTERDISCIPLINARY HEALTH CARE TEAM

MEMBERS

- Doctors, dentists, nurse practitioners and registered nurses, occupational therapists, pharmacists, physician assistants, physical therapists, social workers, nutritionists, and clergy
- Team members collaborate to address patient problems that are too complex for one discipline, or even many sequential disciplines, to solve, share a cul
- Teams are client-centered and helpful in addressing complex health and psychosocial issues such as in geriatric patients and those with life limiting illnesses
-



Physician, neurologist poet laureate of medicine
Deafness “mishearings” “aberrations in hearing” not that someone is not hearing they are mishearing
Capsize meaning, novel concoctions
Irrelevant in terms of meaning and content
Based on one’s own experiences and interests

OLIVER SACHS ON “MISHEARINGS”

“instantaneous inventions-they reflect, to some extent, one’s own interests and experiences”

“I am forced to think that Freud underestimated the power of neural mechanisms, combined with the open and unpredictable nature of language, to sabotage meaning, to generate mishearings that are irrelevant both in terms of context *and* of subconscious motivation”

MISHEARINGS

- Can a biography of cancer become a biography of Cantor
- A grocery bag heard as a poetry bag
- Tonsillitis as pontillitis
- All-or-noneness into oral numbness
- A porch into a Porsche
- Christmas Eve as command to “Kiss my feet!
- I am off to choir practice – heard as firecrackers

THANK YOU
BWEINSTEIN@GC.CUNY.EDU