Design for Healthy Aging Across the Continuum of Care
Inclusive Design: The Process, Product and People

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Senior Medical Planner
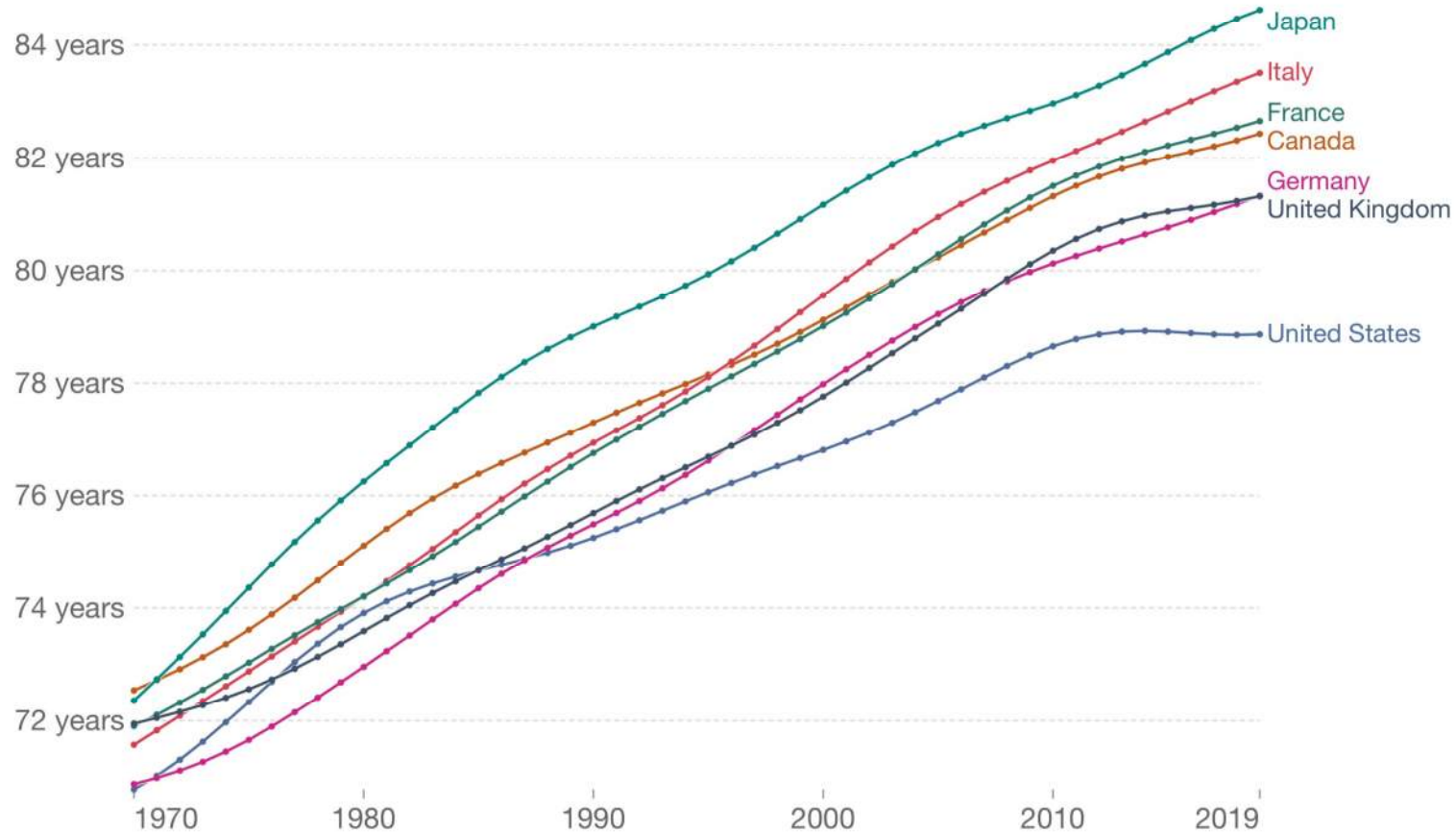HOK

Christine Vandover
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Life expectancy, 1970 to 2019

84 years — Japan
— Italy
— France
82 years — Canada
— Germany
— United Kingdom
80 years
78 years — United States
76 years
74 years
72 years

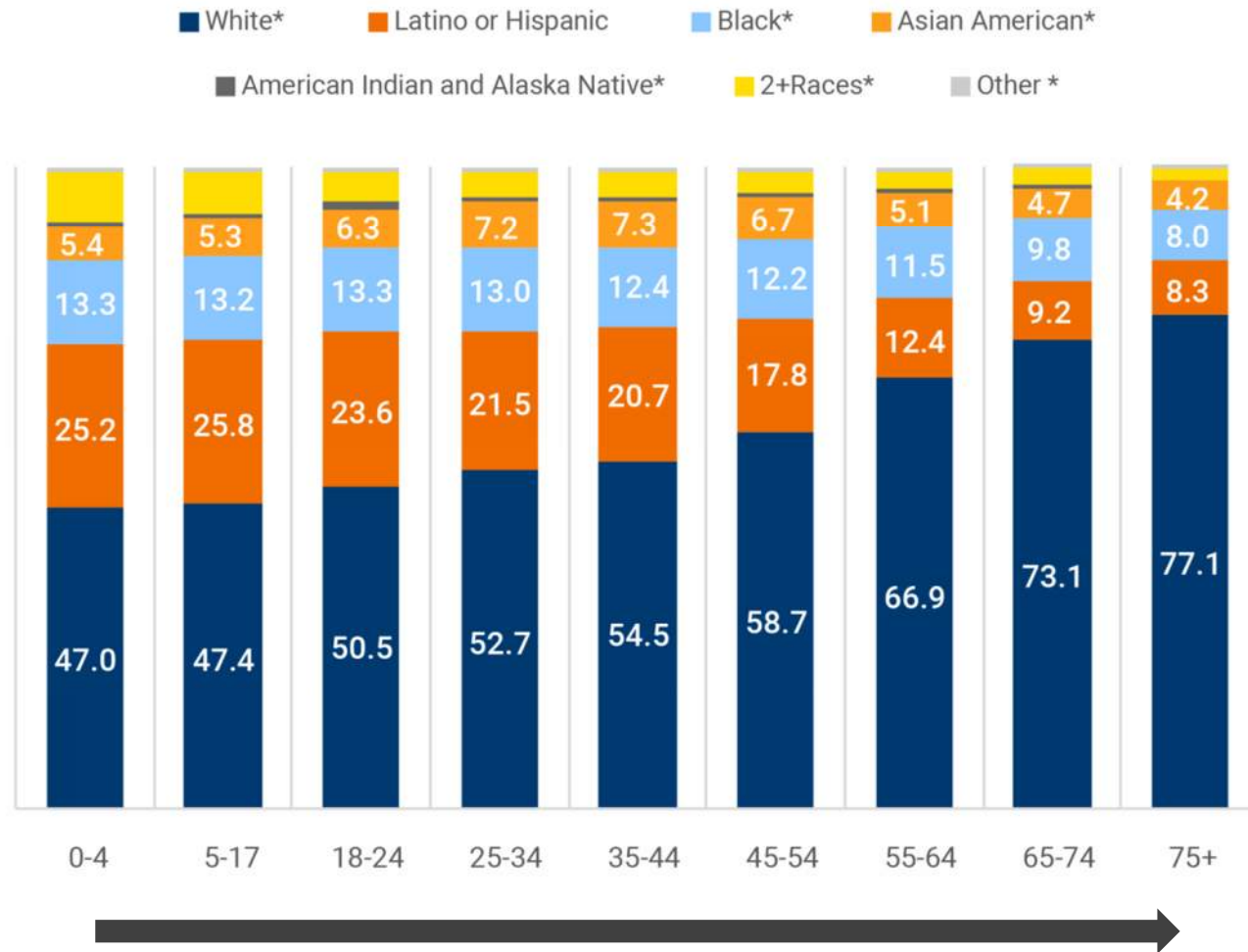1970   1980   1990   2000   2010   2019

Why is it important to address inclusion in healthy aging?

Although the United States has a lower life expectancy than other OECD countries, the rate has generally held steady after peaking in 2014. Due to demographic trends, the older population is growing as a total share of the population and becoming more racially and ethnically diverse.

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FIGURE 3

Race-ethnic population shares by age

2020

Legend:
- White*
- Latino or Hispanic
- Black*
- Asian American*
- American Indian and Alaska Native*
- 2+Races*
- Other *

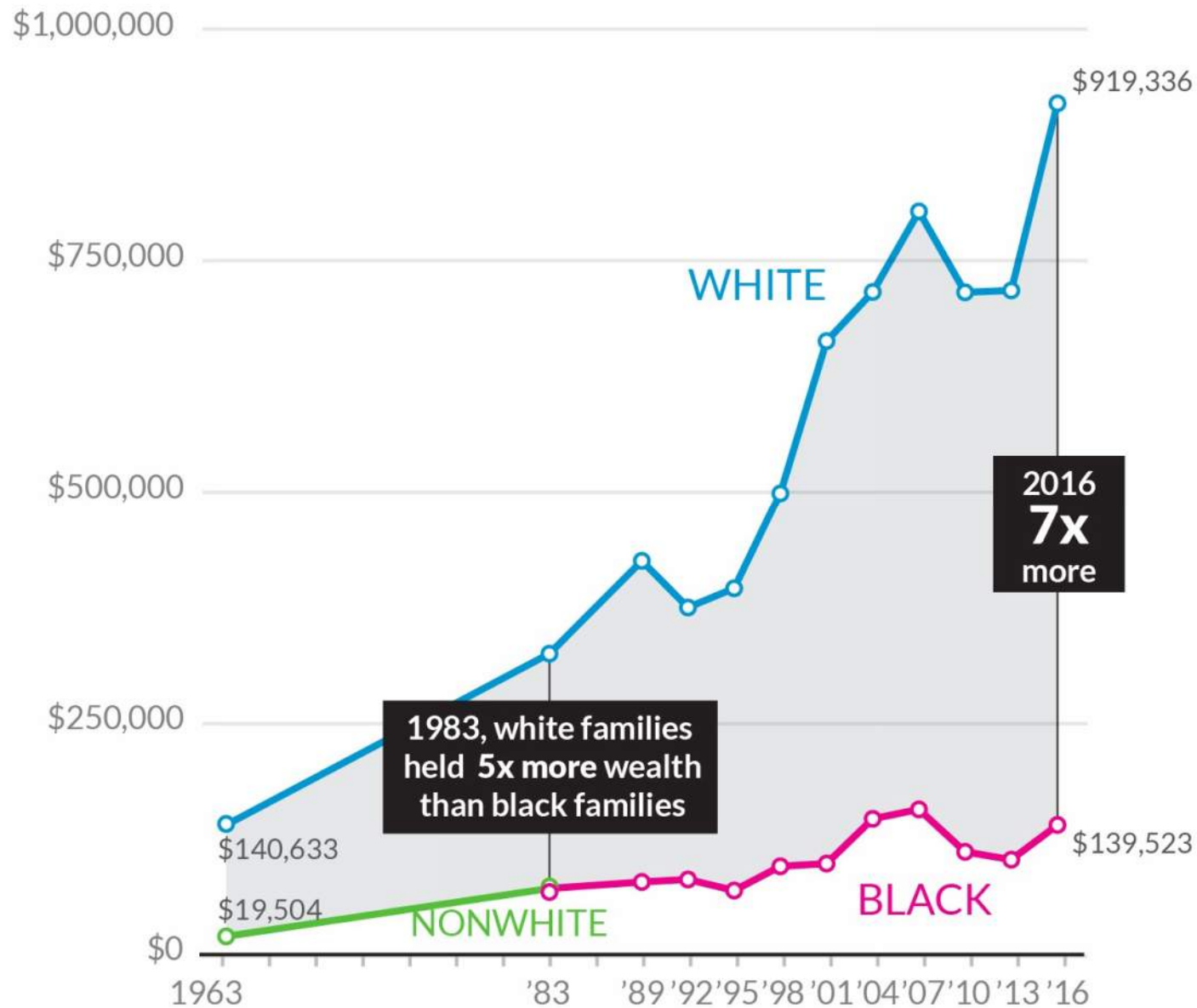| Age	White*	Latino or Hispanic	Black*	Asian American*
0-4	47.0	25.2	13.3	5.4
5-17	47.4	25.8	13.2	5.3
18-24	50.5	23.6	13.3	6.3
25-34	52.7	21.5	13.0	7.2
35-44	54.5	20.7	12.4	7.3
45-54	58.7	17.8	12.2	6.7
55-64	66.9	12.4	11.5	5.1
65-74	73.1	9.2	9.8	4.7
75+	77.1	8.3	8.0	4.2

*Non-Hispanic members of race
Source: Willam H. Frey analysis of the 2020 Census Demographic and Housing Characteristics File released May 25, 2023

B | Brookings Metro

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Average Family Wealth by Race/Ethnicity, 1963-2016

$1,000,000

$919,336

$750,000

WHITE

$500,000

2016
7x
more

$250,000

1983, white families
held **5x more** wealth
than black families

$140,633

$19,504

NONWHITE

BLACK

$139,523

$0

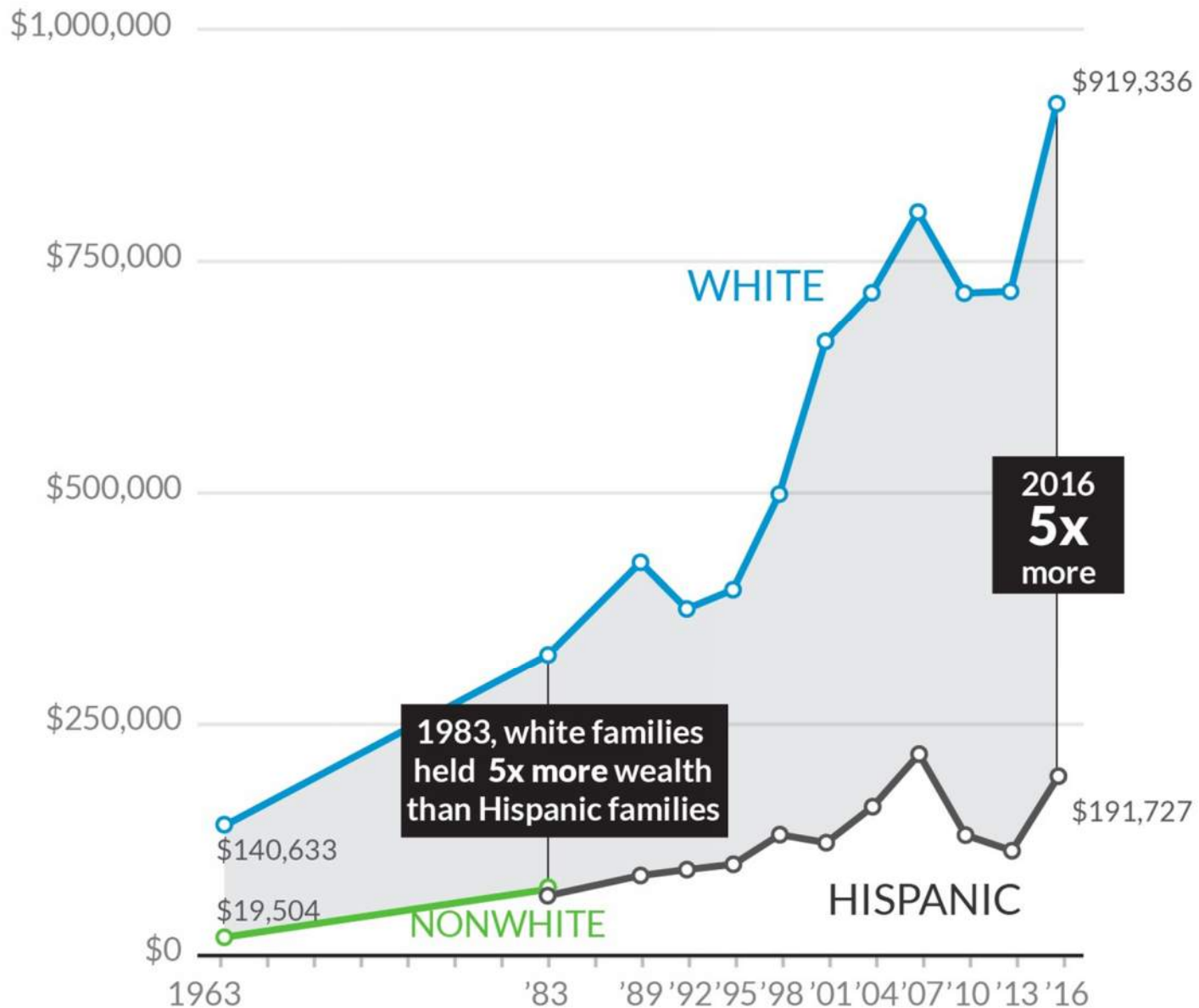1963   '83   '89 '92 '95 '98 '01 '04 '07 '10 '13 '16

Source: Urban Institute

Why is it important to address inclusion in healthy aging?

Because all environments for healthy aging have costs associated with them, poverty and wealth affects elders' ability to age with a range of options. For this reason, there is also a racial, ethnic and neurodiversity differential in healthy aging, because wealth correlates to these racial demographic differences in the United States.

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HISPANIC

$0

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Why is it important to address inclusion in healthy aging?

"More than half of people with autism have four or more co-occurring conditions... Only about 2 percent of funding for autism research supports studies on the needs of adults, and most of that money goes to studies of young adults, according to a 2016 report. The past five years have seen a small surge in research on older people, and the findings are alarming."
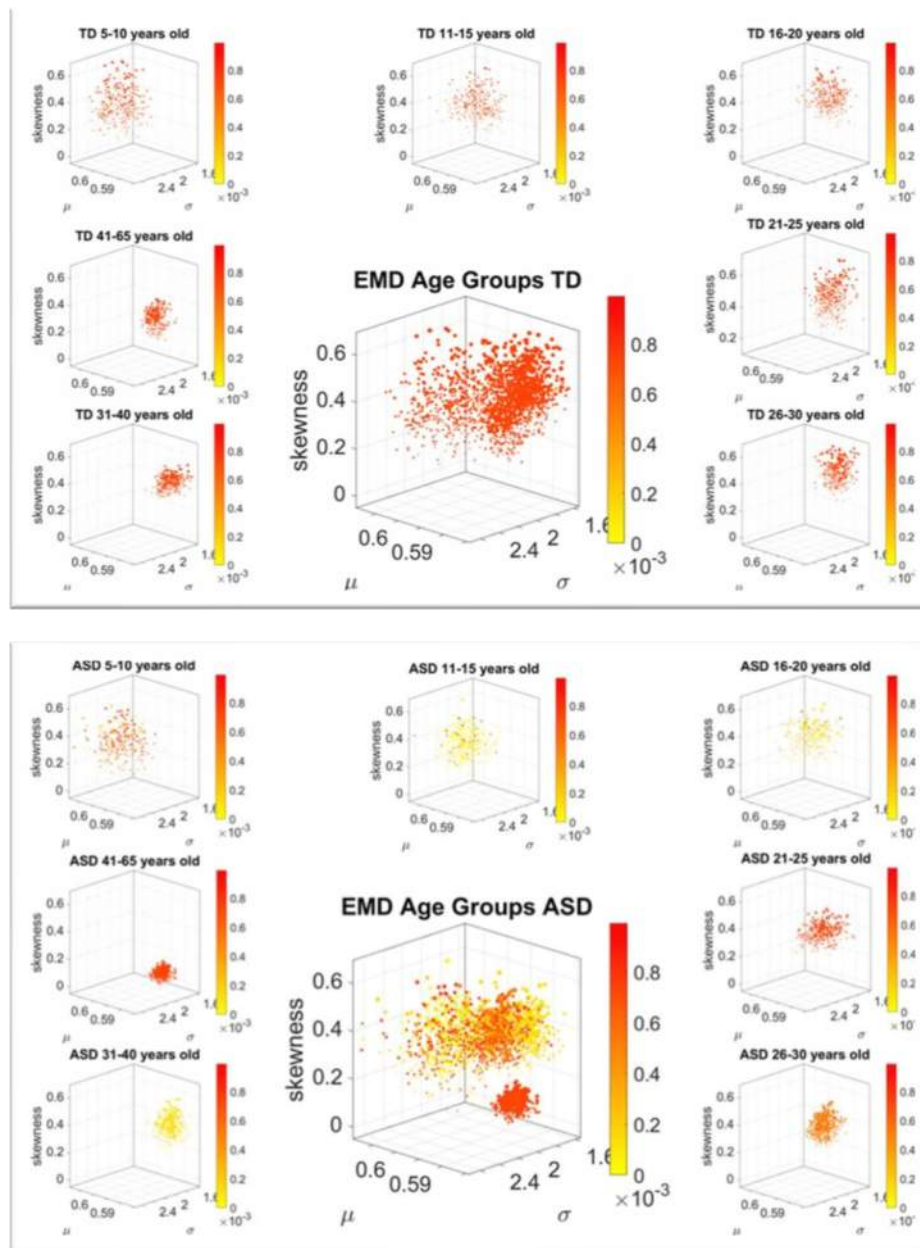
Image Source: "Aging with Autism Departs Greatly from Typical Aging" (www.ncbi.nlm.nih.gov)
Text Source: "Growing Old with Autism" (spectrumnews.org)

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EMD Age Groups TD — EMD Age Groups ASD

Why is it important to address inclusion in healthy aging?

"One big study found that autistic adults are significantly more likely than typical adults to have 19 of the 22 physical health conditions the study looked at, as well as 8 of the 9 mental health conditions. For instance, adults with autism are 19 times as likely as controls to have epilepsy and 6 times as likely to have Parkinson's disease."
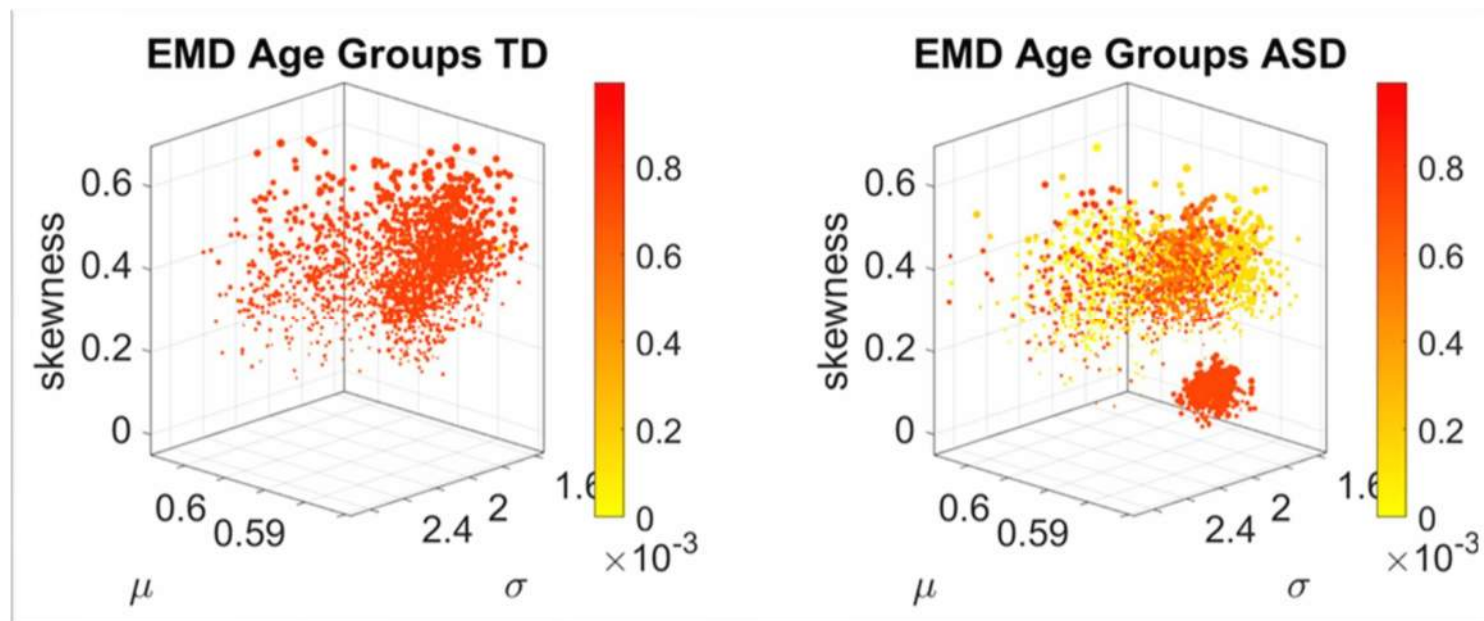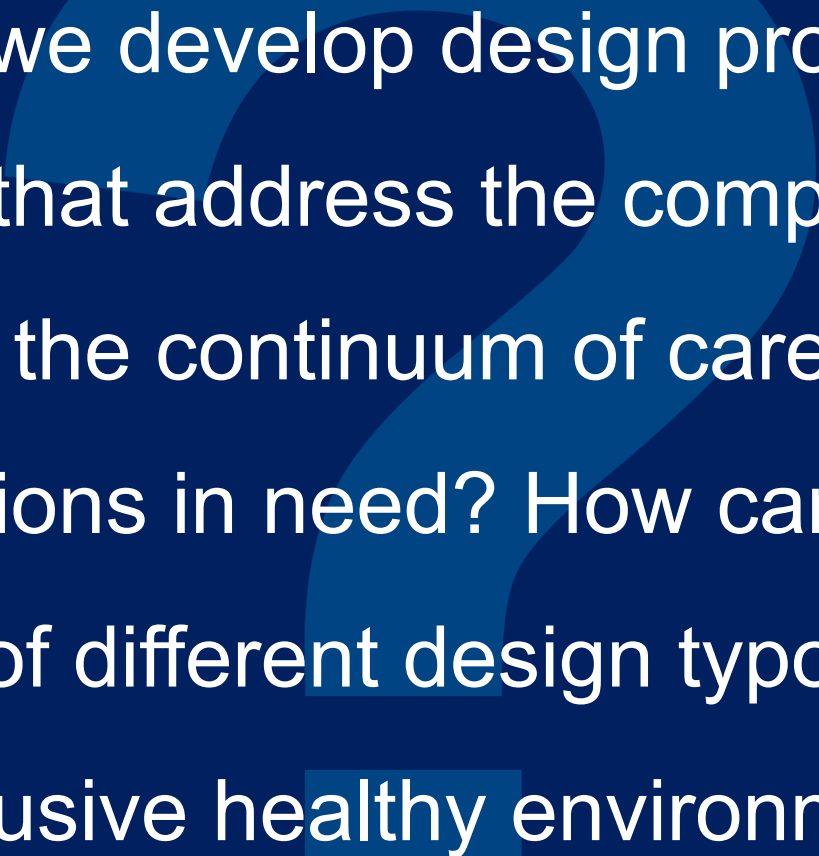
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WHO

How can we develop design processes and characteristics that address the components of healthy aging, across the continuum of care *and* across the diverse populations in need? How can we leverage our understanding of different design typologies to improve universal, inclusive healthy environments for aging?

Acute Care

Continuing Care Communities

Memory Care

Nursing & Healthcare

Skilled Nursing Facility

Assisted Living

Hospice and Palliative Care

Residential

Independent Living

Home Care

Downsizing, Cohousing, ADUs & Shares

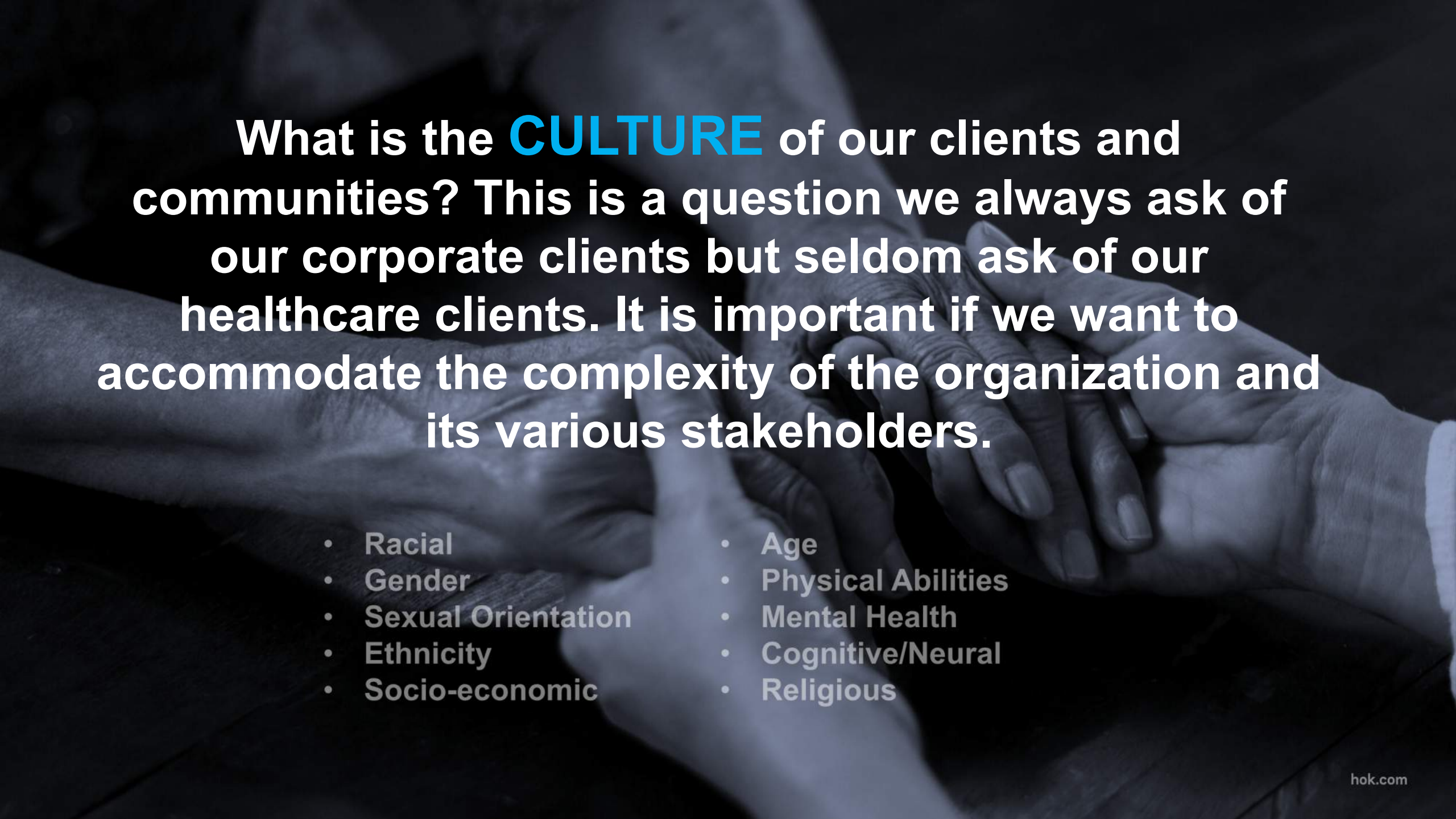Aging in Place
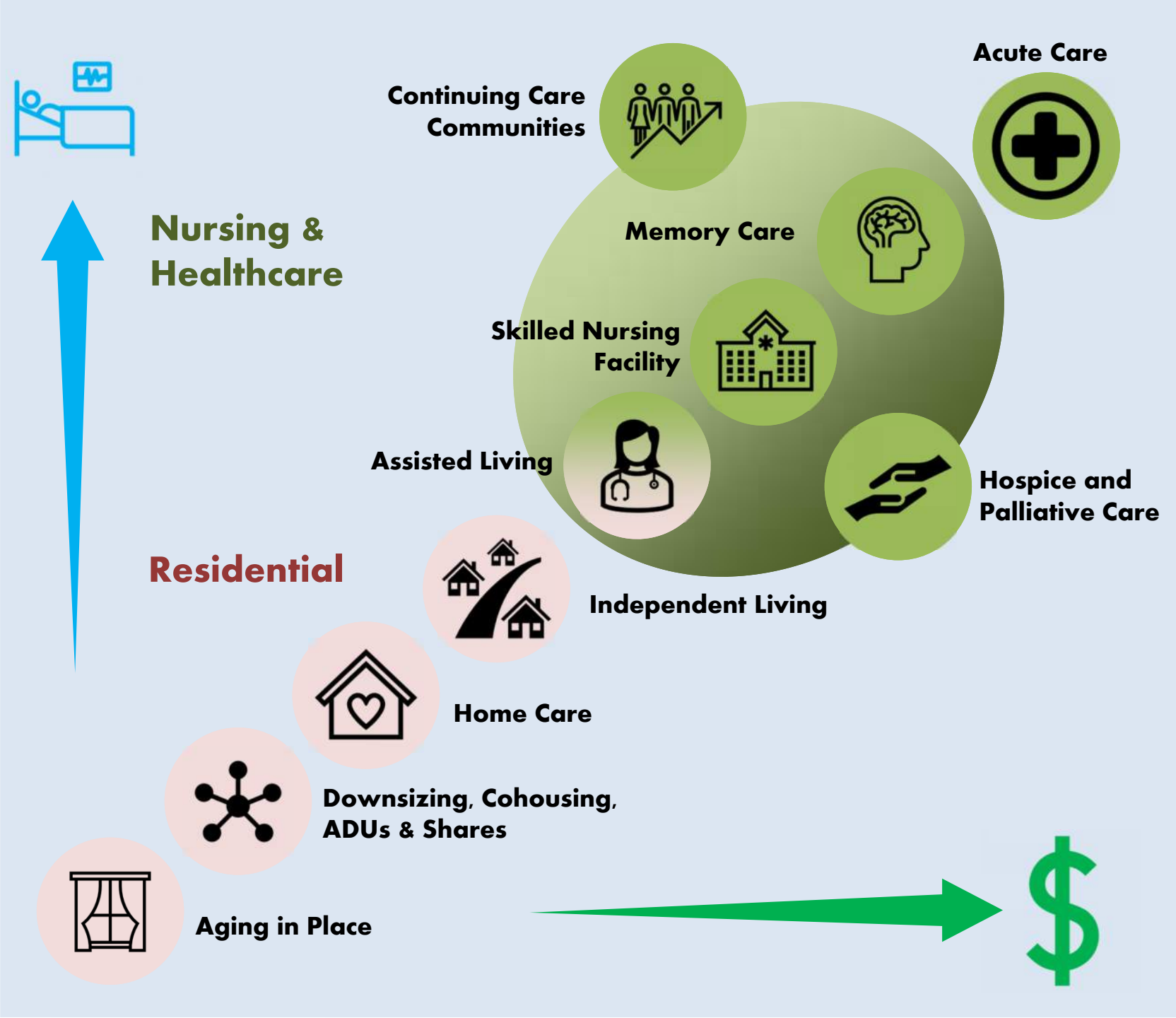
Elder Options and the Continuum of Care

Because healthcare is extended to many of the environments of elder care, healthy aging principles should be inclusive of these environments, as well as including the diversity of race, ethnicity, culture and ability along the continuum. Designers should also be conscious of the relative costs of care AND design interventions along the continuum.

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Everyone is not the same.

We as designers must endeavor to include a diversity of perspectives in the design process, by enlarging the share of stakeholders.

- Racial
- Gender
- Sexual Orientation
- Ethnicity
- Socio-economic

- Age
- Physical Abilities
- Mental Health
- Cognitive/Neural
- Religious

What is the CULTURE of our clients and communities? This is a question we always ask of our corporate clients but seldom ask of our healthcare clients. It is important if we want to accommodate the complexity of the organization and its various stakeholders.
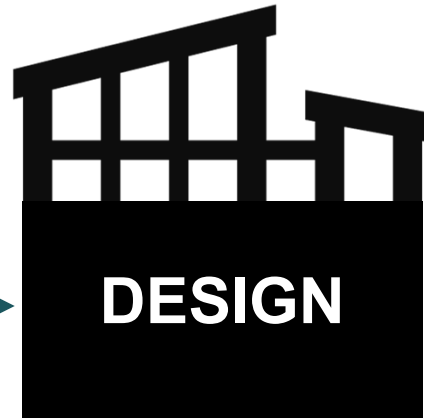
- Racial
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Design Leadership

- Designers
- Planners
- Project Managers
- Consultants
- Project Architects
- Technical Architects
- MEP/S Engineers

System Leadership

- C Suite
- Admin
- Doctors Physicians
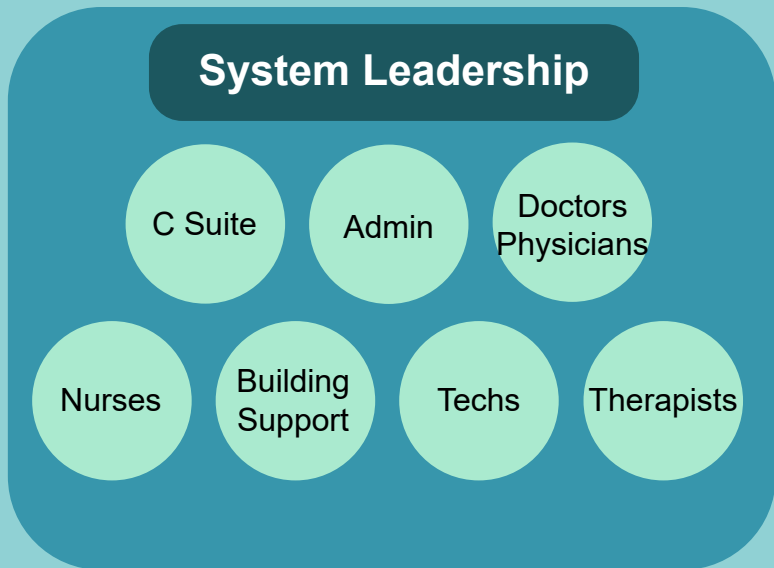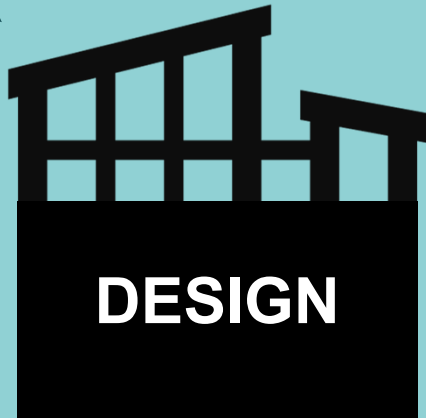- Nurses
- Building Support
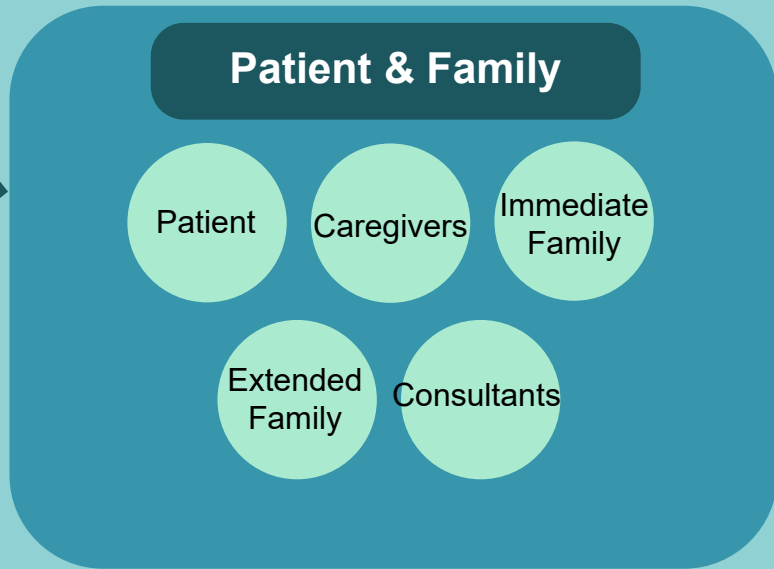- Techs
- Therapists

DESIGN

Patient & Family
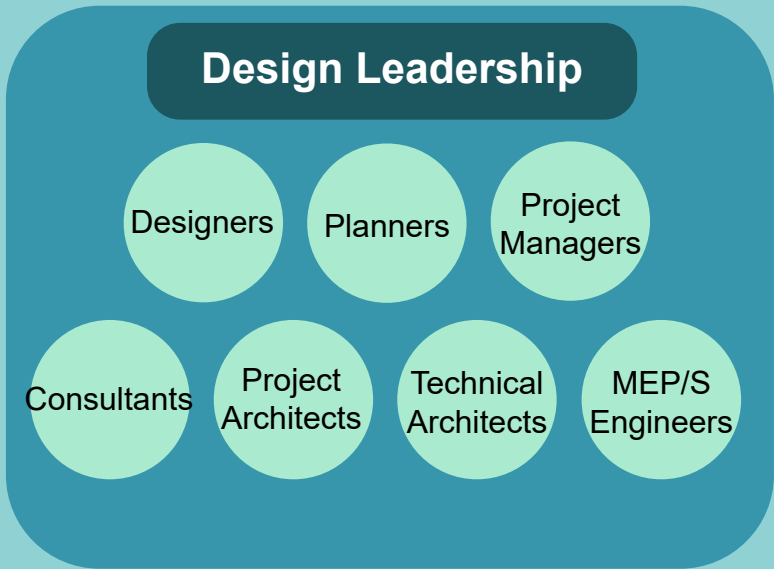
- Patient
- Caregivers
- Immediate Family
- Extended Family
- Consultants

Community Support

- Health Orgs
- Arts Orgs
- Environmental Orgs
- Educational Orgs
- Ethnic Orgs
- Religious Orgs
- Political Orgs

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Employ unique design tools to widen stakeholder input

- Design charrettes

- Workshops

- Community meetings

- Partnership Organizations

- Public Comment

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Employ unique design tools to widen stakeholder input

- Questionnaires

- Focus groups

- Telephone interviews

- Informal gatherings

- One-on-one conversation

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HOW

DESIGNING FOR EQUITY

SUSTAINABILITY

HEALTH & WELLBEING

NEURODIVERSITY

Healthy Aging in the healthcare environment

A holistic approach to health(y) environments, addressing the physical, mental, and psychosocial needs of seniors, should inherently incorporate the principles of universal design. Designing for the full continuum of care for seniors includes non-acute environments and patient experiences.

Source: Philadelphia Corporation for Aging

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Healthy Aging in the healthcare environment

Culture affects how environments can accommodate and encourage healthy aging habits. "Healthy eating", for example, may have different meanings for seniors of different ethnicities. "Staying connected" may require translation services. "Regular exercise" may have specific meaning for disabled and neurodiverse seniors. Providing choices is essential.

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We can apply the principles of _universal_ health design to create environments that encourage healthy aging practices

1. Equitable use

2. Flexibility / multifunctional

3. Simple and intuitive

4. Perceptible information

5. Tolerance for error

6. Low physical effort

7. Size and space for approach and use

Sensory Challenges

AUDITORY

VISUAL

TACTILE

OLFACTORY
(Smell)

GUSTATION
(Taste)

INTEROCEPTIVE
(Internal sensations)
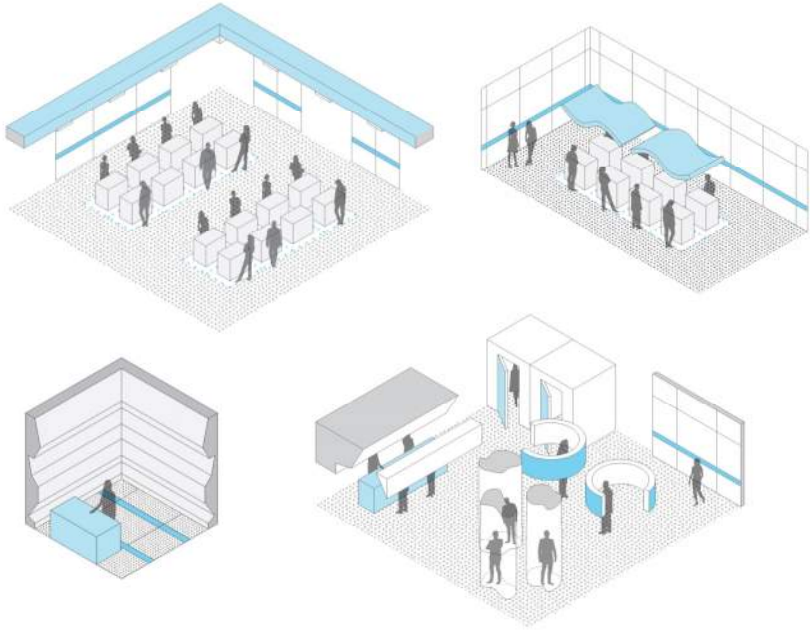
PROPRIOCEPTIVE
(Body position)

VESTIBULAR
(Balance and coordination)

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Sensory Thresholds

HYPERSENSITIVE   NEUROTYPICAL   **HYPO**SENSITIVE

- Prefer less sensory stimuli
- Organic, simple patterns
- Light, neutral colors
- Clean, orderly spaces
- Little to no background noise
- Personal space boundaries

- Prefer more sensory stimuli
- Layering of textures and planes
- Saturated, contrasting colors
- Plenty of visual interest
- Background chatter and/or music
- Space to move/fidget

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Modalities of Healthy Living / The 6Cs

HYPERSENSITIVE						
SPACE TYPES	**CONCENTRATE / FOCUS**	**COMMUNE / PROCESS**	**CREATE**	**CONGREGATE / MEET / LEARN**	**CONTEMPLATE / REFRESH**	**CONVIVIAL / SOCIAL**
HYPOSENSITIVE						

Diverse Settings / Sensory Spatial Sequencing

CONVIVIAL / SOCIAL

CONGREGATE

COMMUNE / PROCESS

CREATE

CONTEMPLATE

CONCENTRATE/FOCUS

CONVIVIAL / SOCIAL

CONGREGATE

COMMUNE / PROCESS

CREATE

CONTEMPLATE

CONCENTRATE/FOCUS

Source: Atria Senior Living, HOK

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1. Having the **option** to select where you will sleep, eat, socialize

2. Spaces that allow you to **move**

3. Spaces that celebrate nutrition and the **connective power of food**

4. Access to **natural daylight** and outdoor spaces

5. One-on-one connection points located in **low-traffic areas**

6. Dedicated **quiet spaces**

7. Spaces that have areas to **retreat** to

8. Rooms where you can turn the **lighting down** or off

9. Spaces that incorporate **natural elements**

10. Adjustable, ergonomic furniture

10 Healthy Design Strategies

Which are most effective for you?

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Thank You

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