



Helping Reduce Long Term Care Demands & Costs to Enable Older Adults— and their Communities— to THRIVE!

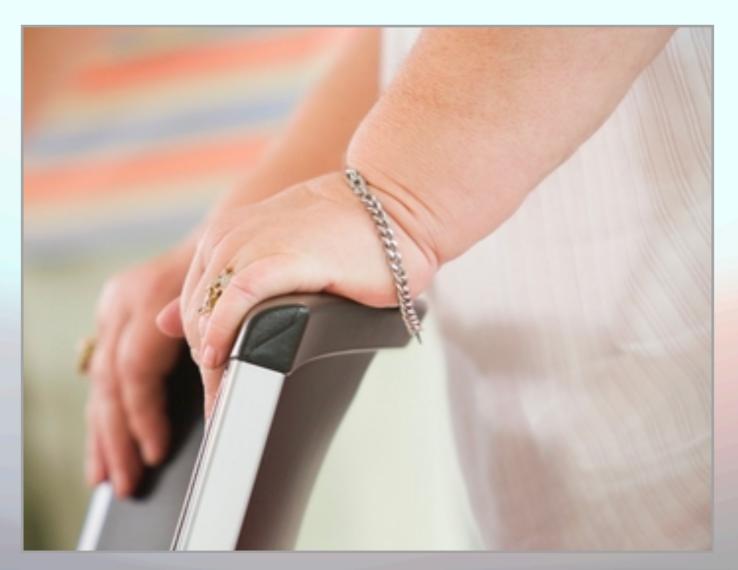
www.silvertogoldstrategies.com

CHALLENGES

- + Older Adult Population
- # Caregivers
- + Demand for Services
- + Costs of Care
- Financial Resources

HOW DO YOU BALANCE THE EQUATION?

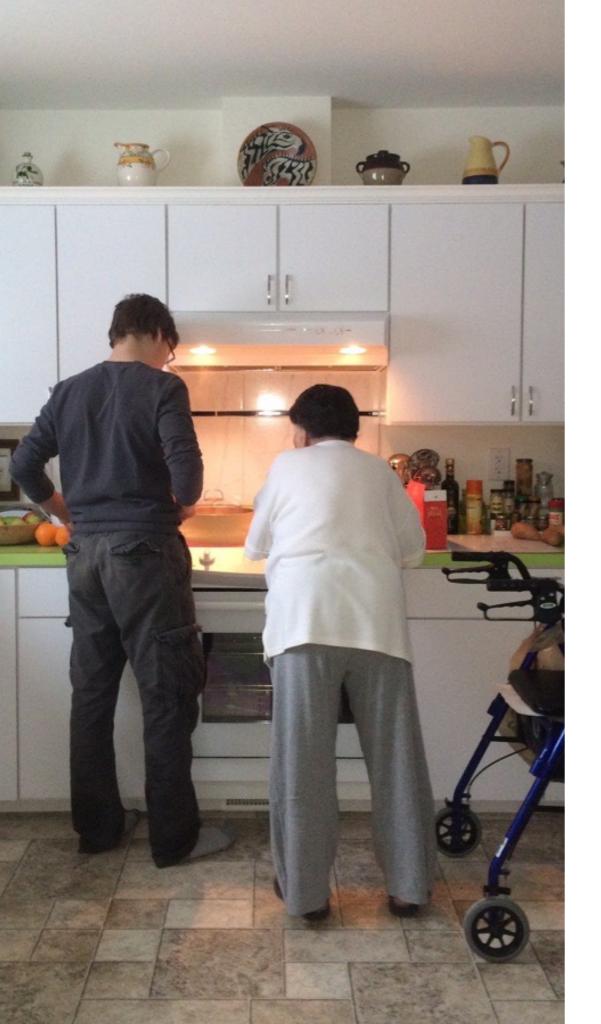
The Built Environment is the **Missing Variable** to Reduce <u>Preventable</u> Long Term Care Demands & Costs



FIRST, DO NO HARM

- Harming People
- Exacerbating Demand for Care
- Provision of Care Harder + \$\$\$\$





Enable People to Maintain Physical & Financial Independence

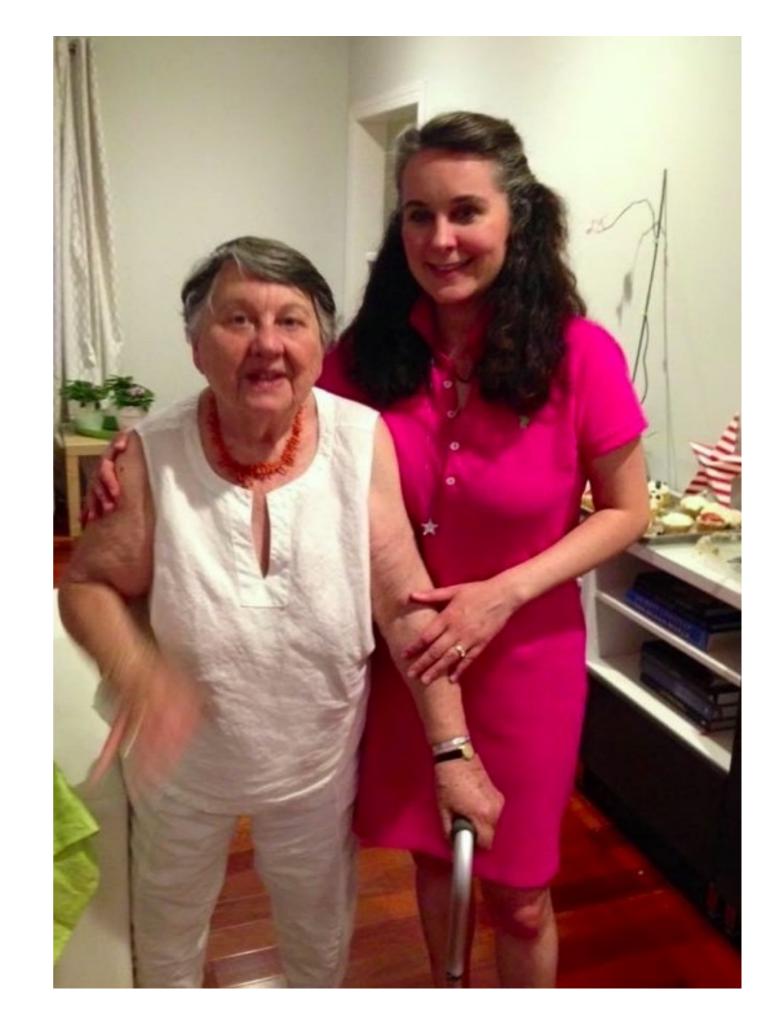




Designed to THRIVE!

and SAVE!

>\$500K Over 10 Years



Cost-Benefit Analysis

- \$500-1000 Investment
- Prevent UTI Infections
- Cost of Aide for Bathing:
 - \$30/hr @ 3 hour shift = \$90
- Reduced Aide Services =SAVINGS
 - \$90 @ 50 weeks = \$4500/yr

\$31,500K in 7 yrs





PARTNERSHIPS:

Regional Healthcare Systems

+ State/Local Government



BUILD A VILLAGE





Enable People to THRIVE! by Design

Continuum of Care

at

Hands Four Development Cooperative & Fiddlehead Corner

https://fiddlehead.coop



What will Fiddlehead Corner *look* like?

We envision:

Clustered housing units, ranging from studio apartments to

two-bedroom homes, surrounded by land that is preserved and conserved.

A community center with

- room for participatory and performing arts, which might occasionally host events open to the greater community.
- o a community kitchen.
- spaces for workouts, practicing, teaching, gathering.



continued on next page...

Fiddlehead Corner, continued...

 A space designed for use by residents who need significant help with ADLs (Activities of Daily Living) or who need supervision due to cognitive impairment. (More on this later.)



Eco-friendly, enabling buildings and infrastructure.
 For example, we are studying the ideas
of Esther Greenhouse, Randall Arendt, and Charles Durrett, all of
whom are brilliant innovators revolutionizing options for aging.

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Continuum of Care

We see health and wellness as a continuum from fully independent to fully dependent.

Being well~physically, mentally, and spiritually means access to:

- People who care about you
- Community-organized events
- Walking trails & gardens
- Spaces for physical activity and for spiritual practice



Personal Goals & Resources

Plan Your Lifespan

This website helps you identify your goals and plan for events such as hospitalizations, falls, and memory loss. This planning differs from end-of-life care and wills.

Resources include

- Education, income, location
- Medicare, private health insurance
- Long Term Care insurance
- Family & friend caregivers
- Trusted Professionals

Potential Need

Lifetime risk for Paid Care after age 65

Includes paid home care, residential care (assisted living), nursing home care, and Medicaid-financed nursing home care

- 48% receive some paid care over their lifetime
- 70% develop severe care needs before death
- Many rely exclusively on family and unpaid caregivers

Lifetime risk for Paid Care after age 65

- Most paid-care episodes are relatively short
- Only 24% of older adults receive > 2 years of paid-care
- Only 15% spend > 2 years needing nursing-level care

Lengthy spells of severe needs and paid care are much more common among older adults with few financial resources than their wealthier counterparts.

Research by Richard W. Johnson from Urban Institute

On-site Care Continuum

- Volunteer community care teams
- Part-time paid care in home
- Professional care may include:

Hospital at Home
Telehealth, Patient portal etc
Visiting medical professionals
RN, MD, PT, OT
Palliative Care, Hospice
End of life (death) doulas

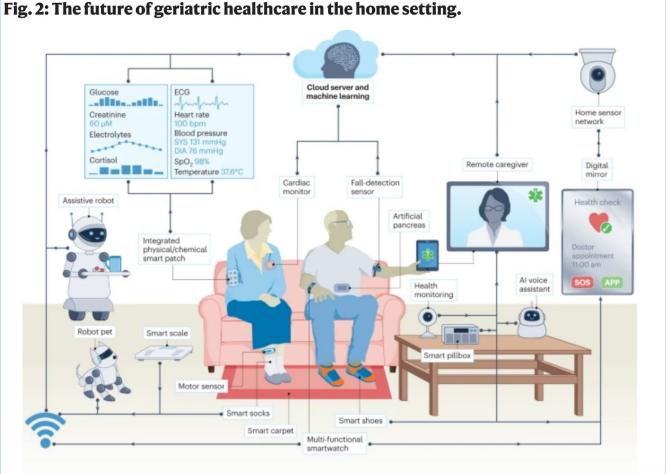


 Six-bed licensed Family Care Home on-site for personal care (2 FCHs planned for 150 homes).

Family Care Home

- Supportive personal care and memory care
- Daily activities tailored to individual needs and desires
- Shared kitchen, living room, and dining room
- Private and semi-private bedrooms for 6 residents
- RN assessment at admission & quarterly
- Universal training for 24-hour staff who are paid a living wage

For more information, see this <u>article on Adult Care Licensure in NC</u>



Find more information in this <u>nature.com article</u> on Digital Health.

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Access to professional care



Healthcare professionals may see residents in person or via telehealth at home, in the community center, or in the Family Care Home.

We plan to arrange for transportation to medical appointments to minimize car trips into town.



Post-Acute Care at Home

Hospital at Home for care is available through UNC and Duke for selected situations, such as:

- Post-acute recovery after hospitalization
- Congestive heart failure
- Chronic obstructive airway disease
- Community-acquired pneumonia
- Etc...

See
"<u>Hospital at home"</u>
UNC website: Care at home



Medicare qualifies some conditions for coverage:

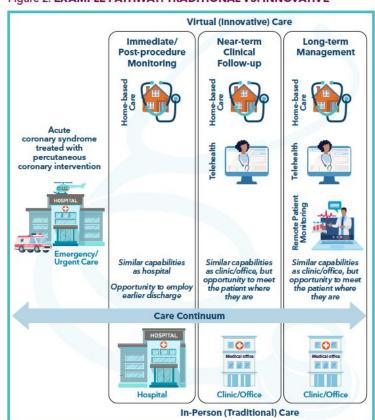
- Daily nursing care
- 24/7 MD/NP & RN
- Diagnostic tests
- Treatments showing improvement

AMERICAN COLLEGE of CARDIOLOGY.

Figure 2: EXAMPLE PATHWAY: TRADITIONAL VS. INNOVATIVE

HOME-BASED

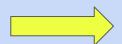
CARE WORKBOOK





VIRTUAL

IN PERSON



Cavorting and merriment, friendship and laughter are likely to occur with shocking frequency.





Fiddlehead Corner: dancingintoretirement.org

Resources for the Continuum of Care

Plan your Lifespan. Click on Summary (top R) to quickly see the info that can be collected privately in this online tool: https://www.planyourlifespan.org/

Digital health for aging populations.

https://doi.org/10.1038/s41591-023-02391-8

Technology for aging in place survey results:

https://www.usnews.com/360-reviews/services/senior-tech-aging-in-place-survey

Aging in Place is not easy:

https://www.forbes.com/sites/howardgleckman/2022/03/21/aging-in-place-is-all-the-rage-but-it-is-not-easy/?sh=696b706d242c

Medically Home (Hospital at Home service used by Kaiser & Mayo) https://www.youtube.com/watch?v=1d4XcdQqACA

More Resources for the Continuum of Care

Care YaYa: Personal care via central scheduling with local health professional students. \$15/hour; scheduled via Uber-type app. https://www.careyaya.org/

Alternatives to nursing homes focuses on the need to increase funding and staffing for "home- and community-based services" (HCBC), especially for frail low income clients on Medicaid.

https://www.marketwatch.com/story/covid-19-devastated-nursing-homes-here-are-safer-more-cost-effective-options-11602245129?mod=mw_latestnews

Community Aging in Place is a 4- to 5-month program with RN, OT, and caregiver who work with an older adult to set goals and plan to change behaviors to improve health, independence, and safety. https://capablenationalcenter.org/ <a



Innovation to
Advance Care Equity
in North Carolina







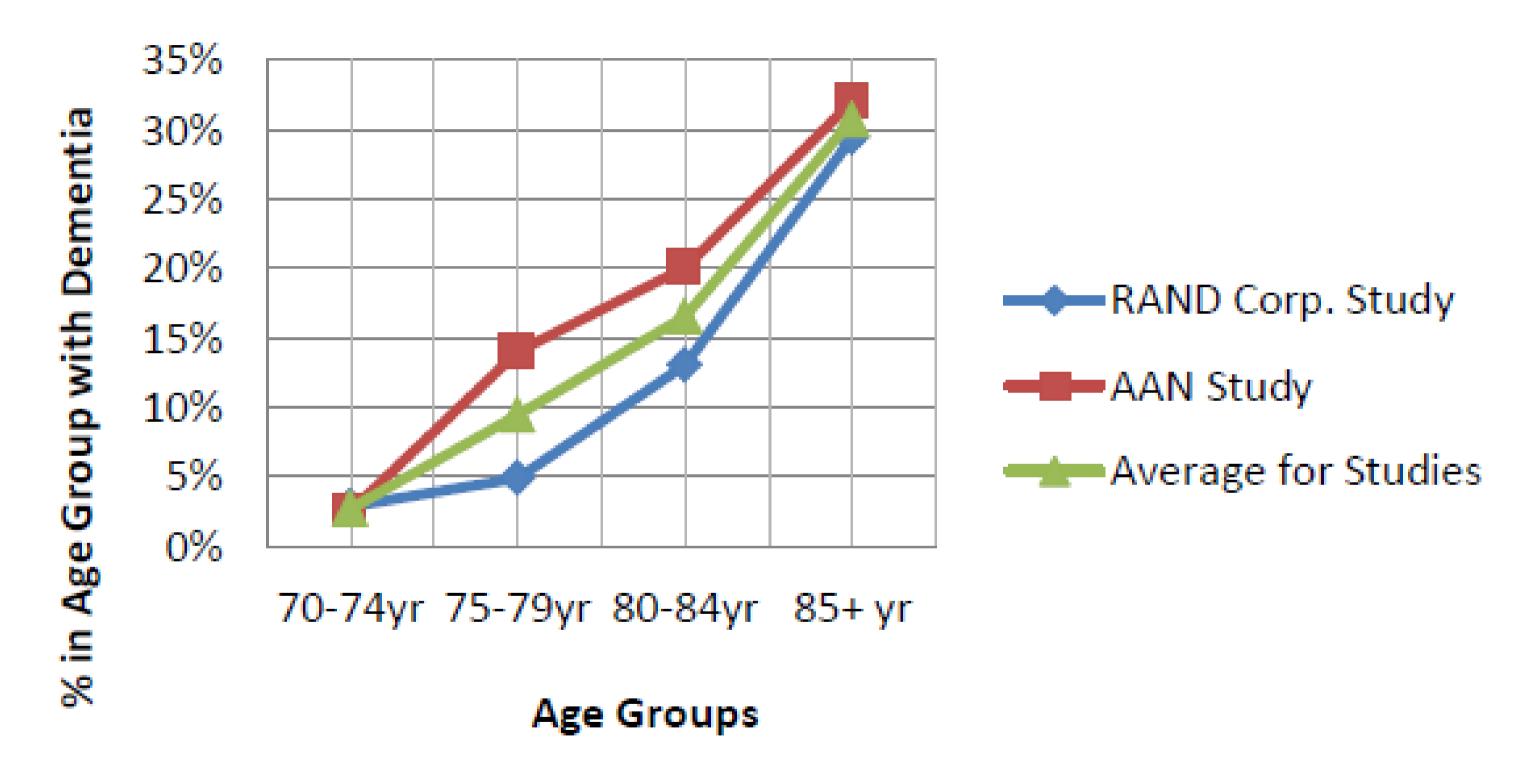
Today's Topics

- 1. Dementia Crisis
- 2. The Broken Care Industry
- 3. Impact on Women & Minorities
- 4. Our Solution: CareYaya.org

The Dementia Crisis

- 1. Aging Population
- 2. Social Isolation
- 3. Brain Impact from COVID Infections

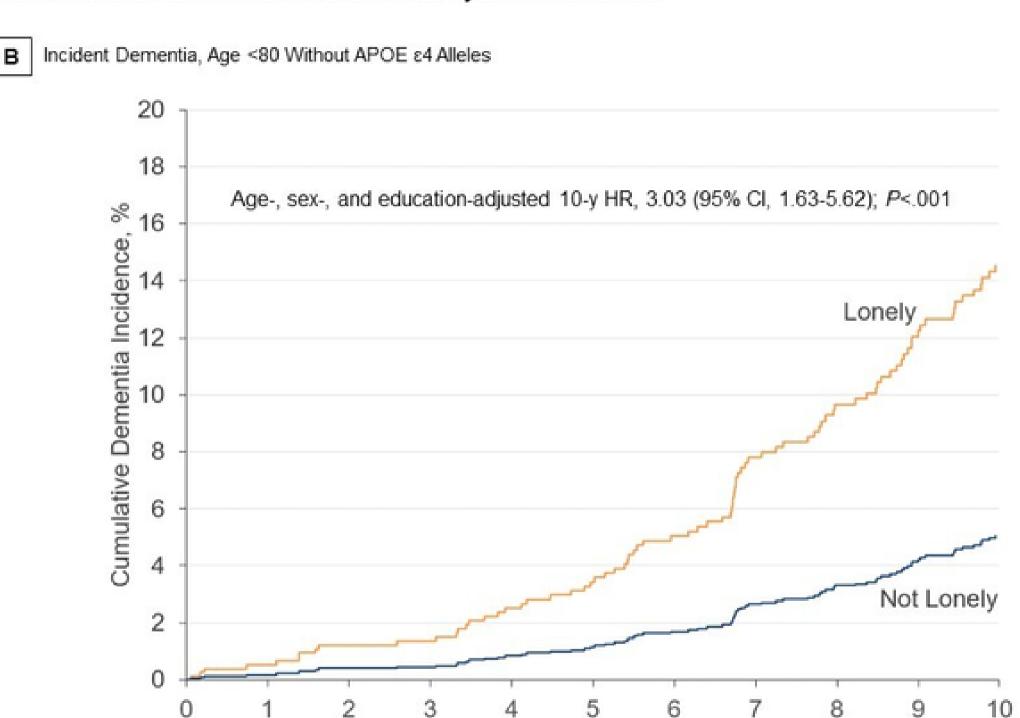
Dementia Probability Increases With Age...



Baby Boom started in 1946; Boomers are turning 75+ rapidly

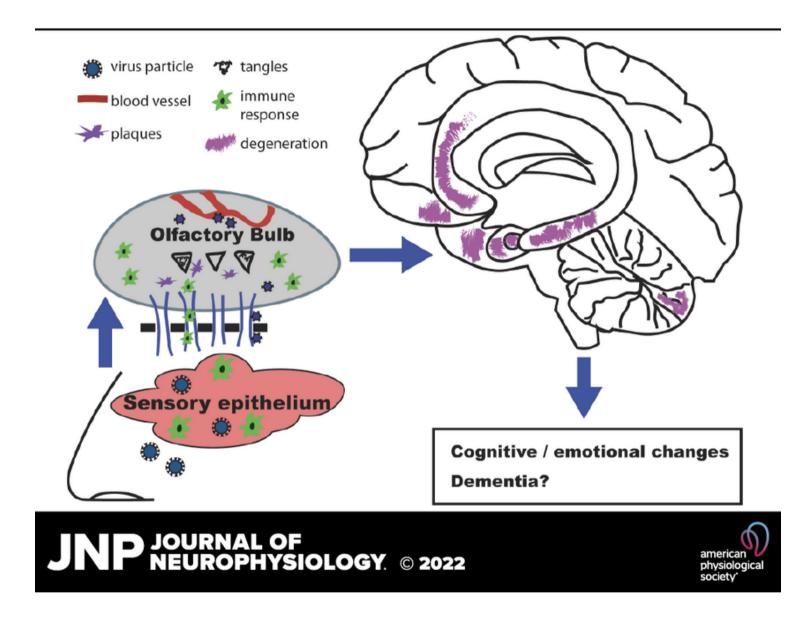
...And Increases With Loneliness

Figure 2. Ten-Year Cumulative Incidence of Dementia by Loneliness Status

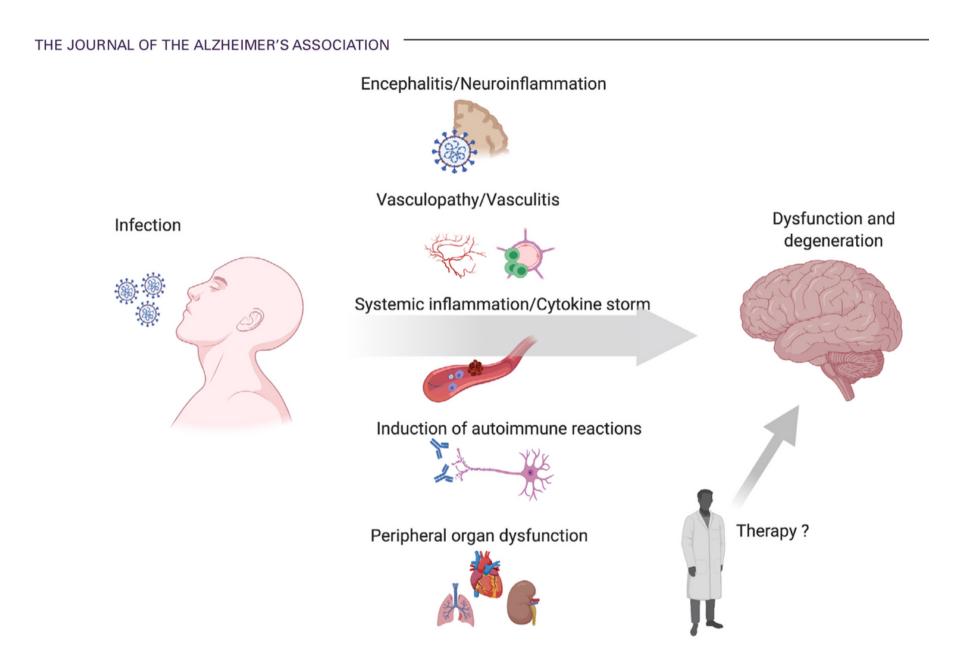


Few years of lockdowns/isolation have led to loneliness epidemic

COVID Impact on Brain



Damage from even mild COVID in elders shows a pattern of inflammation and degeneration similar to early stages of Alzheimer's disease.



CRISIS



Danger



Opportunity

Danger!

- Demand for care to rise rapidly
- Workforce shortages (health & home care) will intensify
- Leading to disparities in access and worse outcomes

Opportunity!

- Bring more people into home and health care
- Lower costs + expand access through institutional payors
- Technology to improve outcomes



Lack of affordable elder care is a crisis in our state

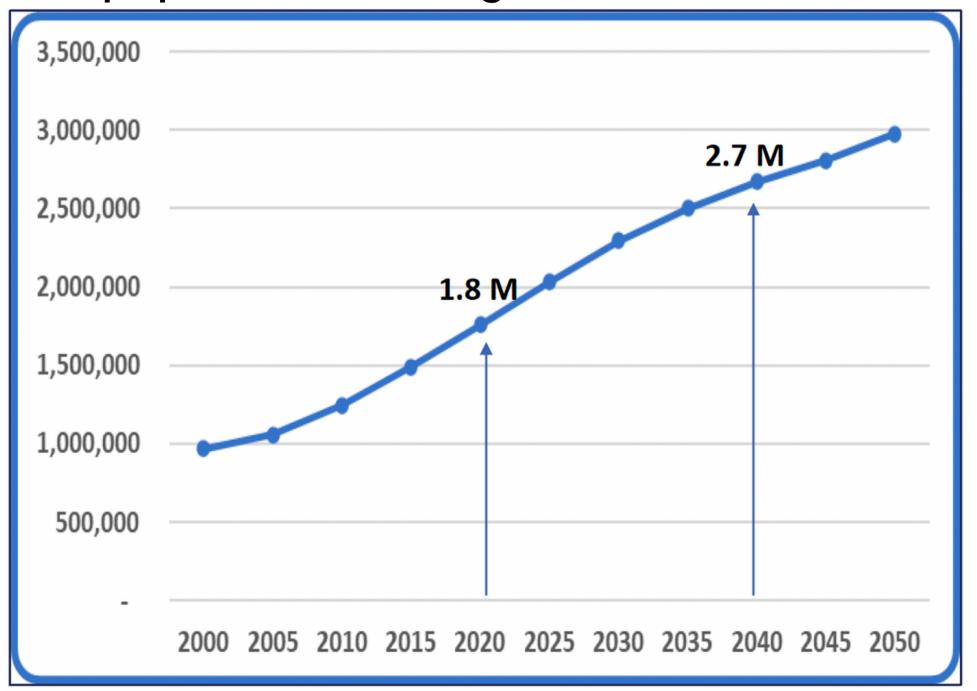
- 2 million elders in NC
- 800,000 "frail elders"
- Only 150,000 can afford current care options



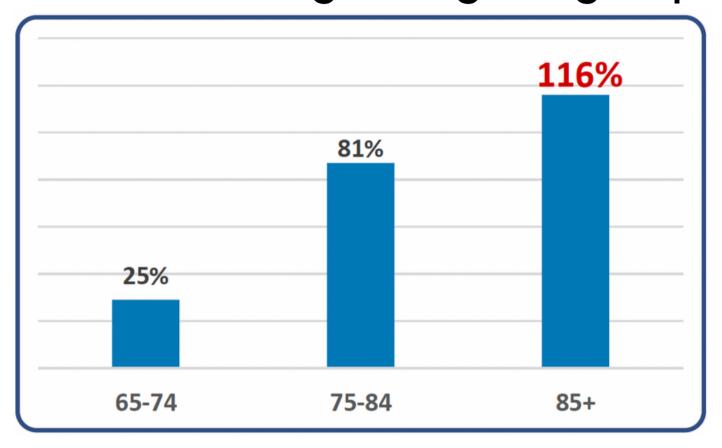
650,000 IN URGENT NEED

North Carolina is Aging Rapidly

65+ population is rising fast...

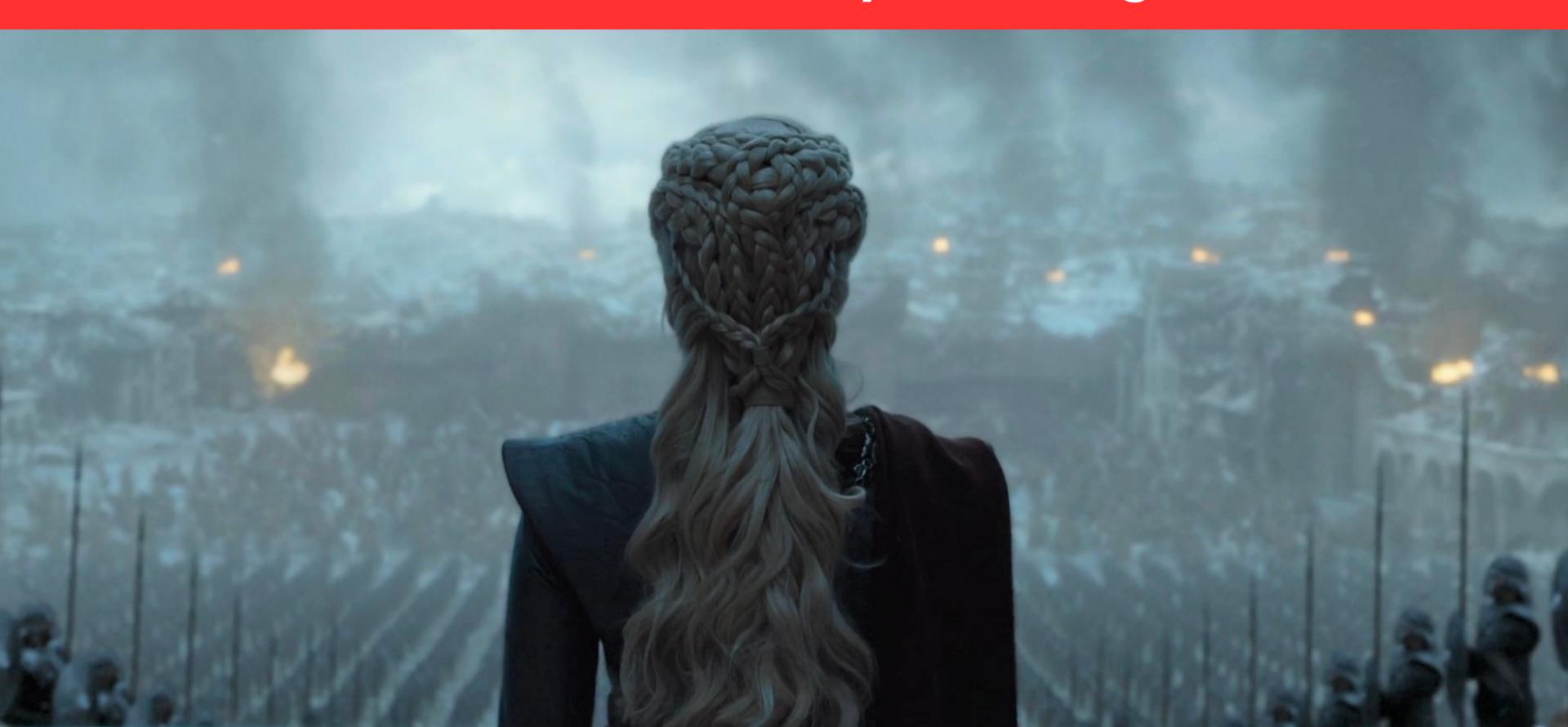


85+ is fastest growing subgroup



- Care needs skyrocket at this age, with functional limitations, frailty and higher rates of chronic illness.
- This population will need the most long-term support.

To Combat the Coming Crisis in Care Needs, We Will Need an Army of Caregivers.



What about the current Care Workforce?

119,000

Current Home Care Workers

186,000

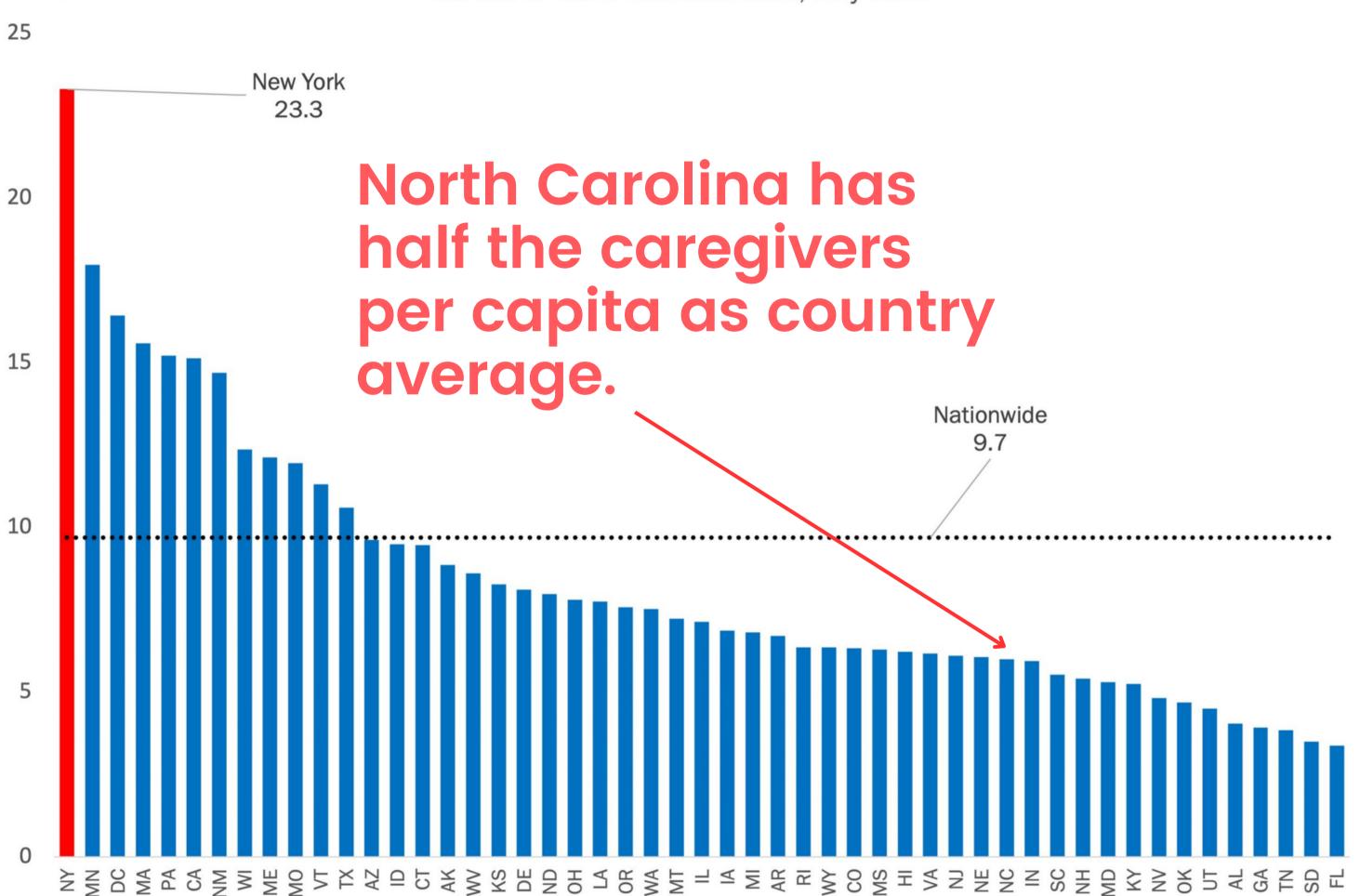
Additional Needed

People aren't rushing to join the industry!



Home health and personal care aides per 1,000

Bureau of Labor Statistics data, May 2020



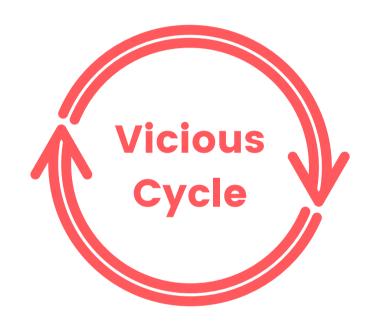
Why can't care agencies serve the need?

The Care Agency system is broken...

Tough for families

- Cost too high: \$25-35/hour
- Contracts & minimum hours
- Client turnover ~70%/year





Waste more money on sales & marketing to get new people

Tough for caregivers

- Pay too low: \$11-13/hour
- Unhappy & have to find 2nd jobs
- Workforce turnover ~65%/year



Less than HALF of what the family pays, goes to the caregiver!

Local care agencies start with good intentions, but enter into a broken system

You start one
Have tons of costs
Limited territory - no economies of scale
Limited flexibility in how you operate based on local economy
Still can't pay yourself enough

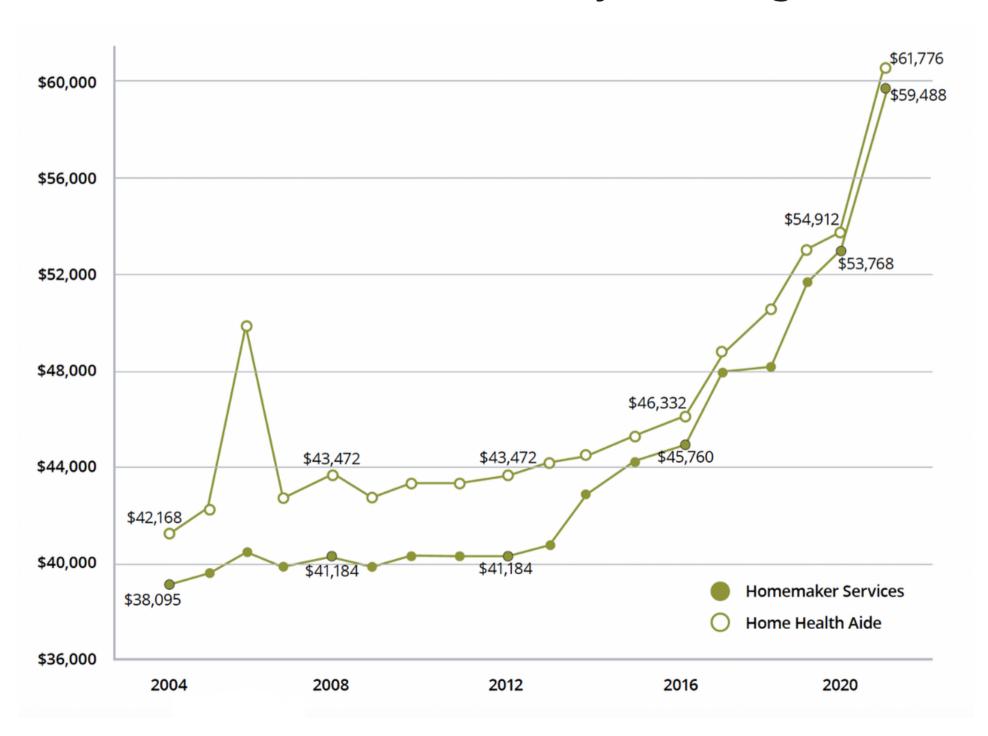
Fees spent on:

Franchise Fees to Corporate Franchisor Royalties on Revenues to Corporate Franchisor Sales & Marketing Expenses

Conflict exists between National Franchisor and Local Franchisee

Care Agency System is Broken: Leaving Middle Class Families Behind.

Median cost of home care is skyrocketing...

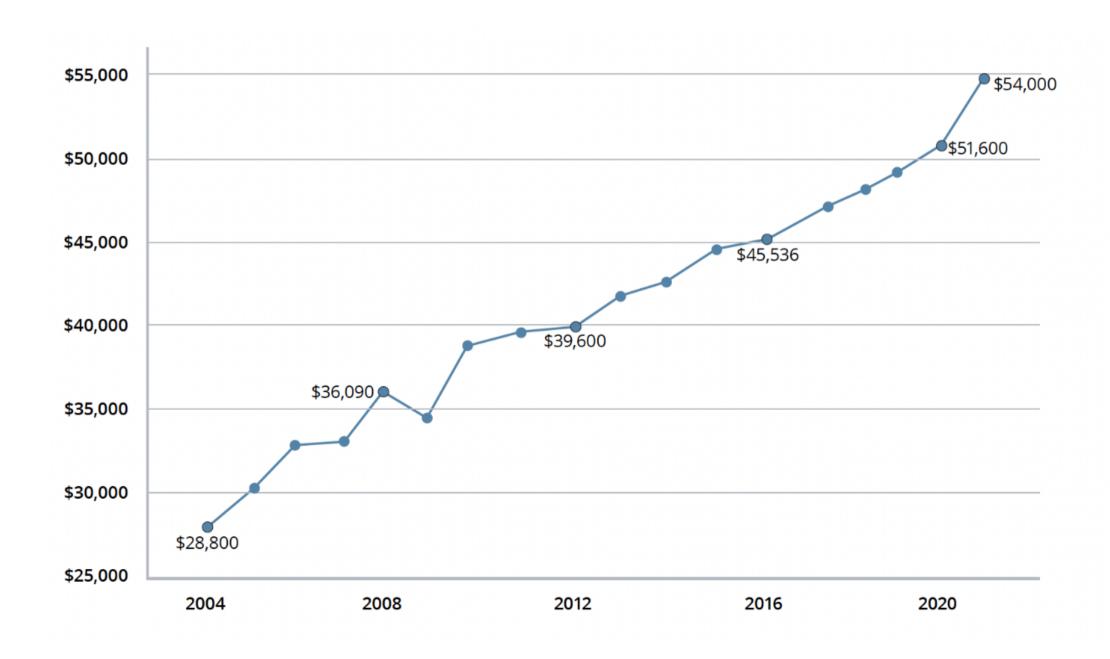


- Optimized for the top 5%
- Leaving behind more and more families who desperately need the help



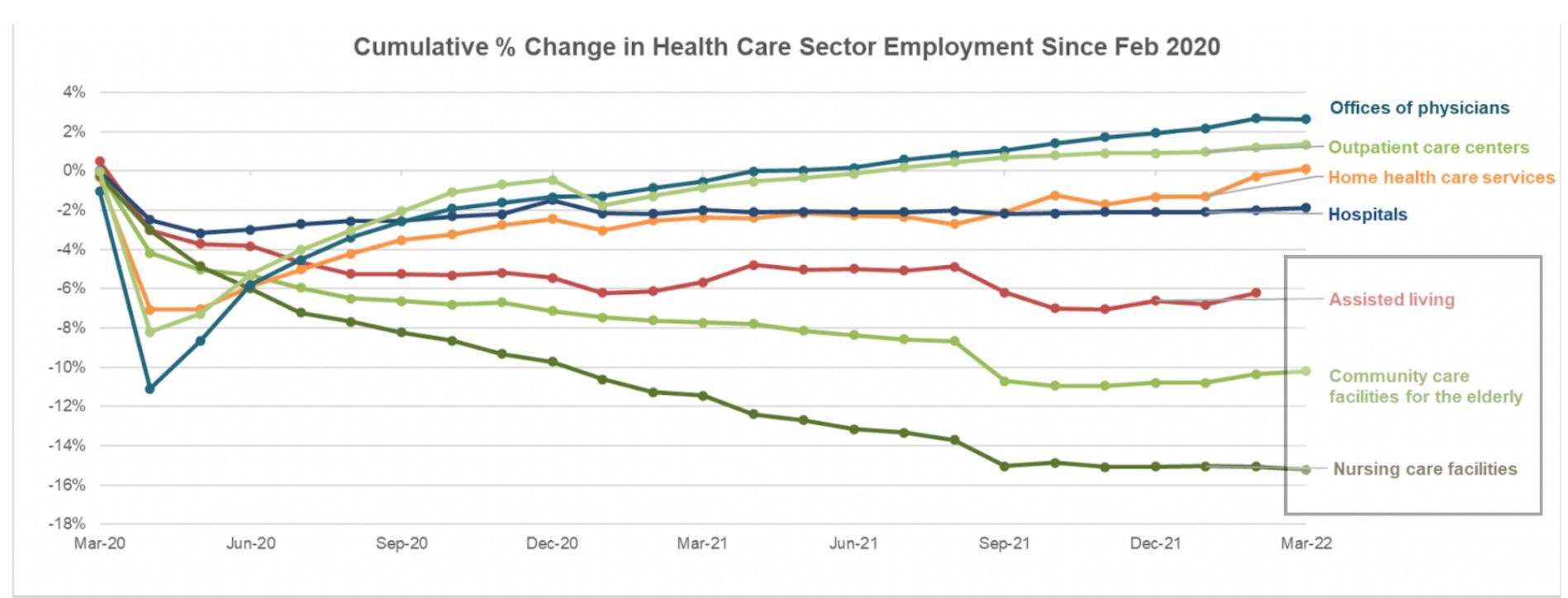
What's Going to Fill the Gap: Assisted Living / Nursing Homes?

Median Cost of Assisted Living



 Pricing out more and more families who desperately need the help

Workers are leaving. Will they come back?



Source: Bureau of Labor Statistics (BLS) February 2020 - March 2022

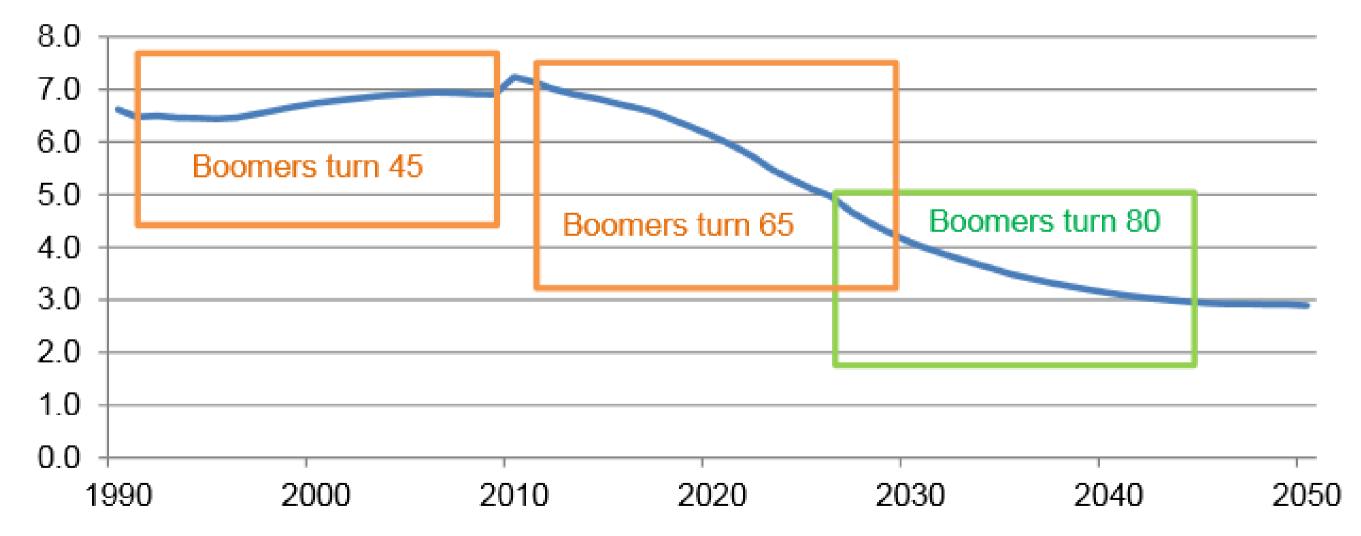
*Assisted Living BLS data through February 2021

87% of facilities are understaffed (National Center for Assisted Living)

What about the family caregivers?

The <u>Baby Boom</u> was followed by the <u>Baby Bust</u>





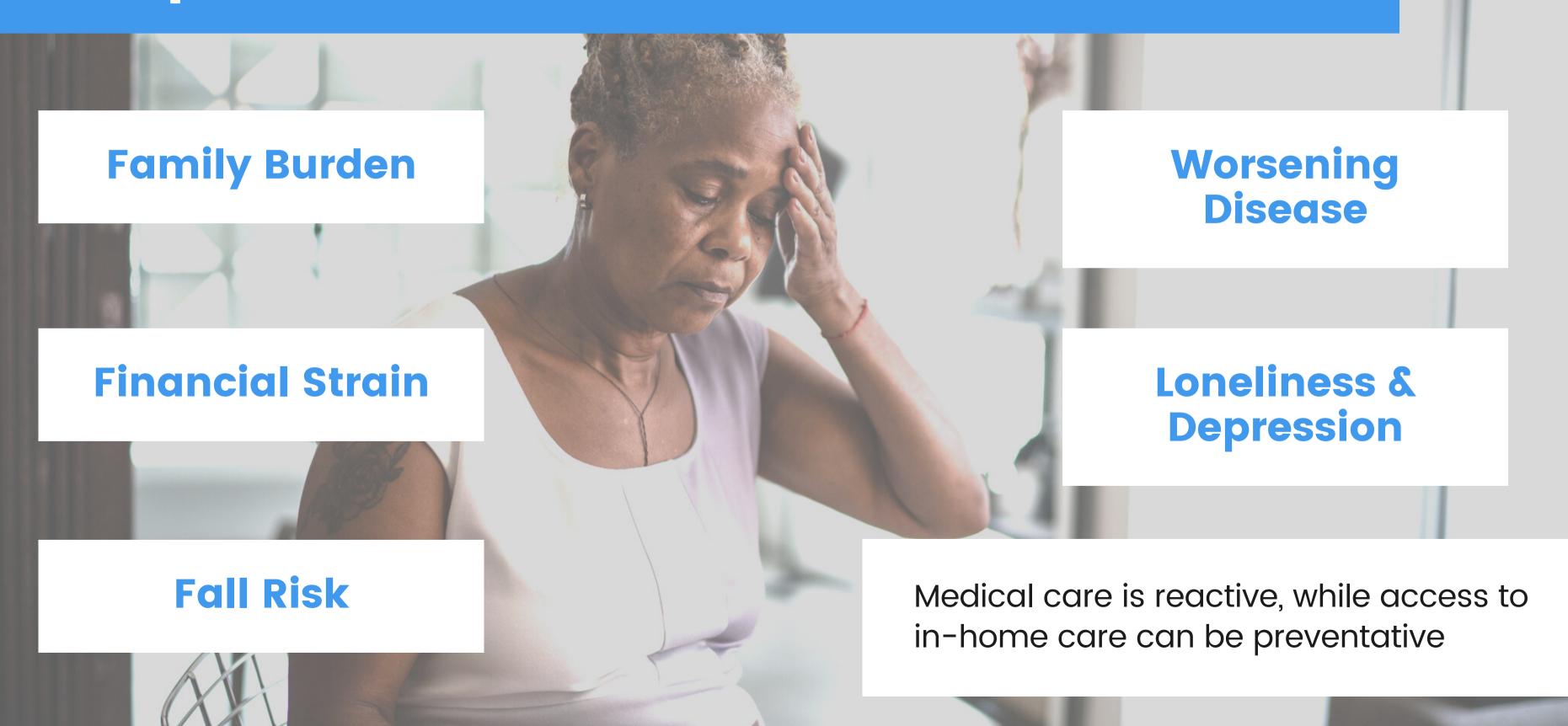
Population more dispersed now (show of hands!)

What happens when families can't find care?

Exacerbates health disparities for the person needing help

- Socioeconomic status, race, ethnicity, disability status, and other underserved social identities are closely intertwined
- Increases fall risk and preventable hospitalizations
- Depression and loneliness

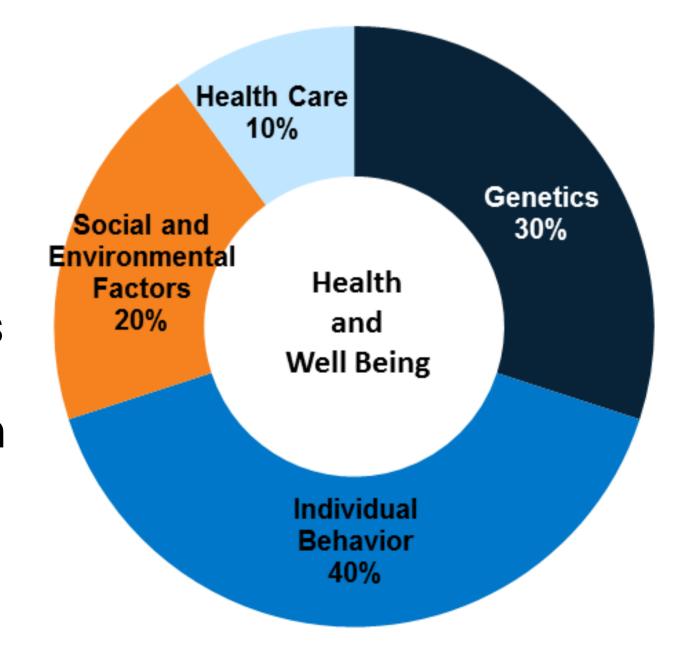
Impacts from lack of in-home care

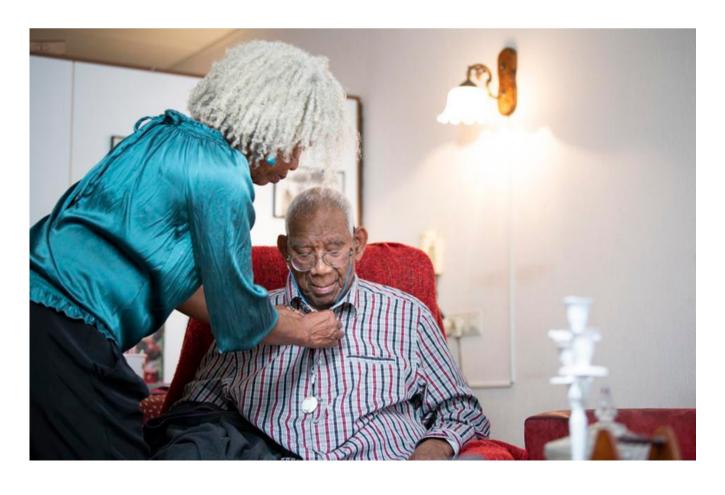


Health equity issue; Low Income = Low Outcome

- Health is what happens at home and in our communities
- Home care drives health outcomes

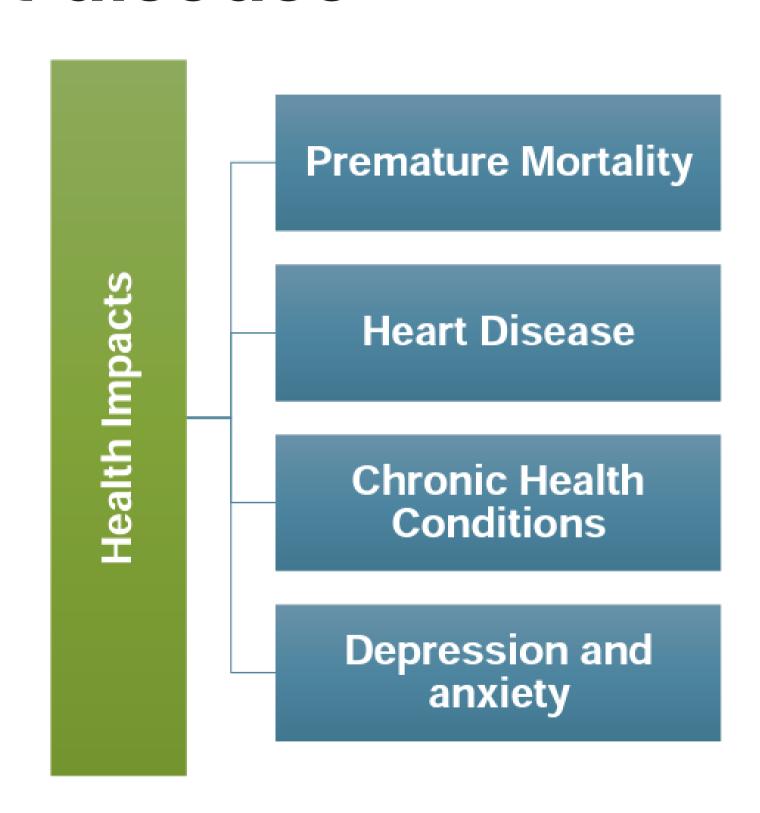
Impact of
Different Factors
on Risk of
Premature Death





Loneliness is the new heart disease

- Equivalent to smoking 15
 cigarettes a day (NY Times)
- Stress, inflammation, reduced immunity
- More dangerous than obesity (fmr Surgeon Gen. Murthy)



Does it impact the family caregiver?

- Stress and mental health impact
- 1 in 4 report toll on physical health from caregiving
- Family members often face burnout when trying to provide care alone

Pressure on family caregivers is intense:

Overpay or DIY

Imagine you're a family caregiver, and your spouse was just diagnosed with cancer or your mother with Alzheimer's...

Waste money: Hire a local care agency

- Very high prices, over \$30+ / hour
- Mixed care experience, lot of delays / no shows

Waste time: Find someone yourself

- Hassle to ask friends/neighbors/religious groups
- Manually message Care.com profiles
- No quality control or scheduling help





Stats don't lie - caregiving impacts careers

Harvard Business School research "The Caring Company":

1/3rd of employees quit a job in their career due to caregiving needs

• 58% to care for an elder or spouse with serious illness

Elder & disabilities care is major need, but most employers only focus on childcare

Reasons workers quit:

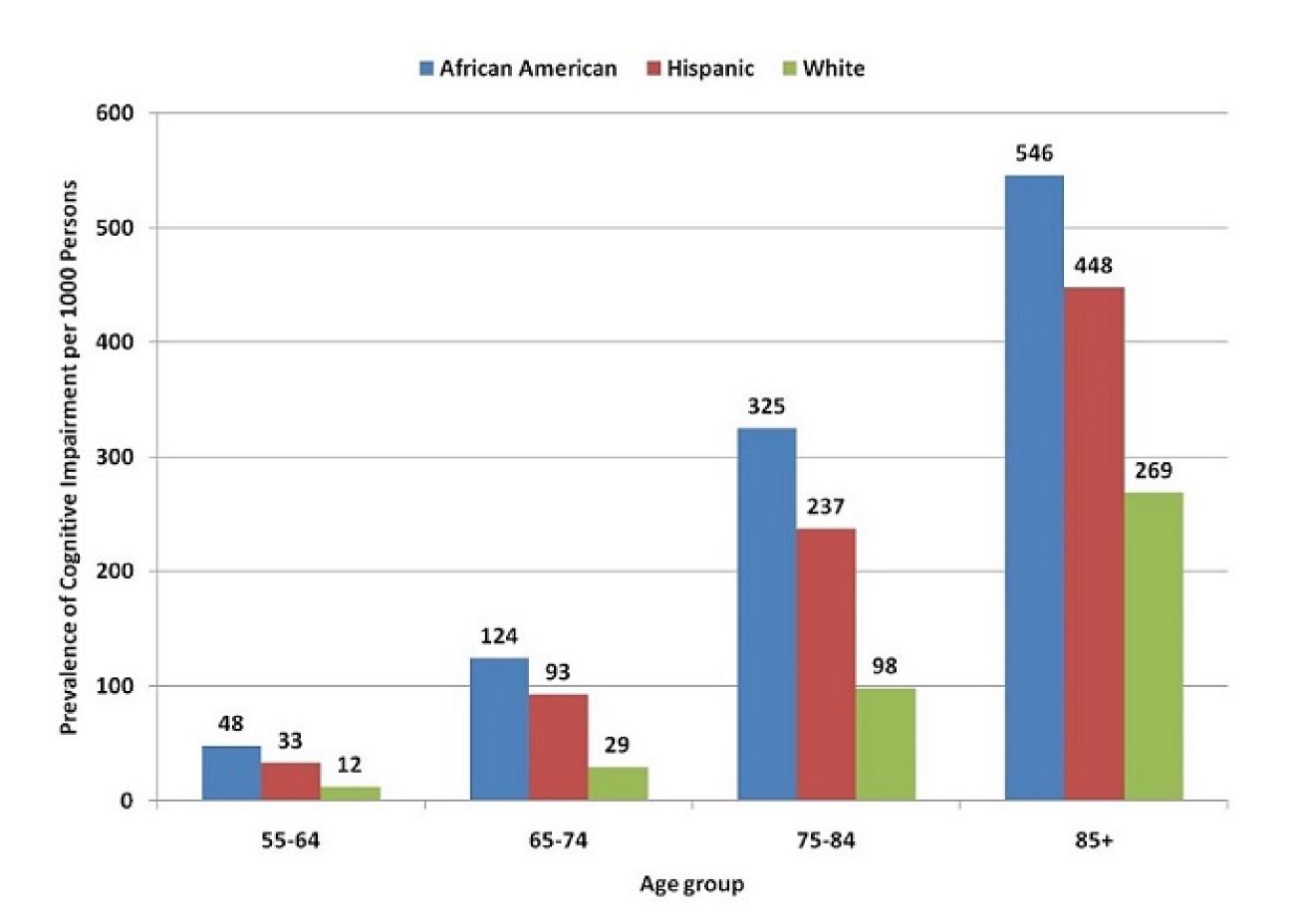
- unaffordable costs of paid help
- inability to find quality help





Do Older Black Lives Matter?

Disproportionate impact on minorities



Estimated percentage of U.S. deaths attributable to dementia among persons aged 70 to 992

12.2%

Non-Hispanic white

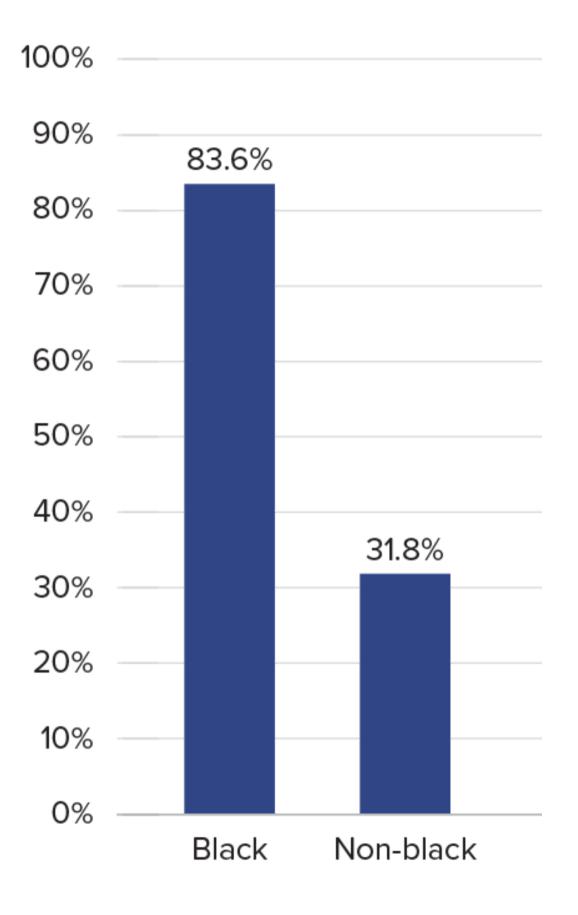
24.7%

Non-Hispanic Black

20.7%

Hispanic

Spend on Dementia Care as % of Net Worth in Last 5 Years of Life



Systemic Financial Discrimination

The cycle is perpetual...

Minority families are less able to afford traditional home care help. They drop out of the workforce to provide the care themselves.

Resulting in:

- 1.3 million unpaid caregivers in NC
- 1.1 billion hours of unpaid care
- \$13.1 billion dollars worth of unpaid care

Generationally compounding systemic racism

Access to care is a basic human right.

What is it going to take???



We need to offer <u>equitable care</u> <u>support</u> to promote better health outcomes for <u>both the individual</u> <u>receiving care and their families</u>.

Opportunity! Why we built CareYaya.org...

- Bring more people into home and health care
- Lower costs + expand access through institutional payors
- Technology to improve outcomes

Yaya (yä yä):

Grandmother (*Greek*), Caregiver (*Swahili, Thai*)
You Are Your Advocate -> the future of self-directed care

Who is CareYaya.org?



Neal K. Shah

Chief Executive Officer

- Previously managed large investment funds focused on healthcare and technology
- Personal experiences with caregiving led to CareYaya
- University of Pennsylvania & UNC Chapel Hill



Gavry Eshet Chief Technology Officer

- Built software implementations using APIs and algorithms that scaled to > 1,000 users
- UNC Chapel Hill Computer Science



Dr. David Casarett Chief Medical Advisor

- Duke Health, Chief of Palliative Care
- Duke University School of Medicine, Professor



Roxy Garrity
Communications



Maggie Xu Product Design



Nirvana Tari *Outreach*

CareYaya Advisory Board

We're funded by leaders of health insurance companies, healthcare and technology executives



Bob Greczyn CEO of Blue Cross Blue Shield NC (Ret.) CEO of Tivity Health (Ret.)



Dr. Linda Rosenstock Chairwoman, SCAN Health Plan Dean Emeritus, UCLA Public Health



Mark Jung Chair of PocketRN Board of Inmar Intelligence























Pre-Health Careers College Students

75,000+ across North Carolina's universities

- Currently do not participate in the "care economy"
- Many are doing DoorDash or Uber to make side income; or working at local restaurant, coffee shop, etc.
- Can work on flexible hours in a "gig economy" platform
- Seek care experiences toward graduate education & healthcare careers. They want to make an impact!

Easy for families to use

- Book care online in less than 2 minutes
- Free to use pay caregiver directly (\$15-18/hour)
- Expanding rapidly across North Carolina

People *love* college students as companions -> "It feels like grandkids!"

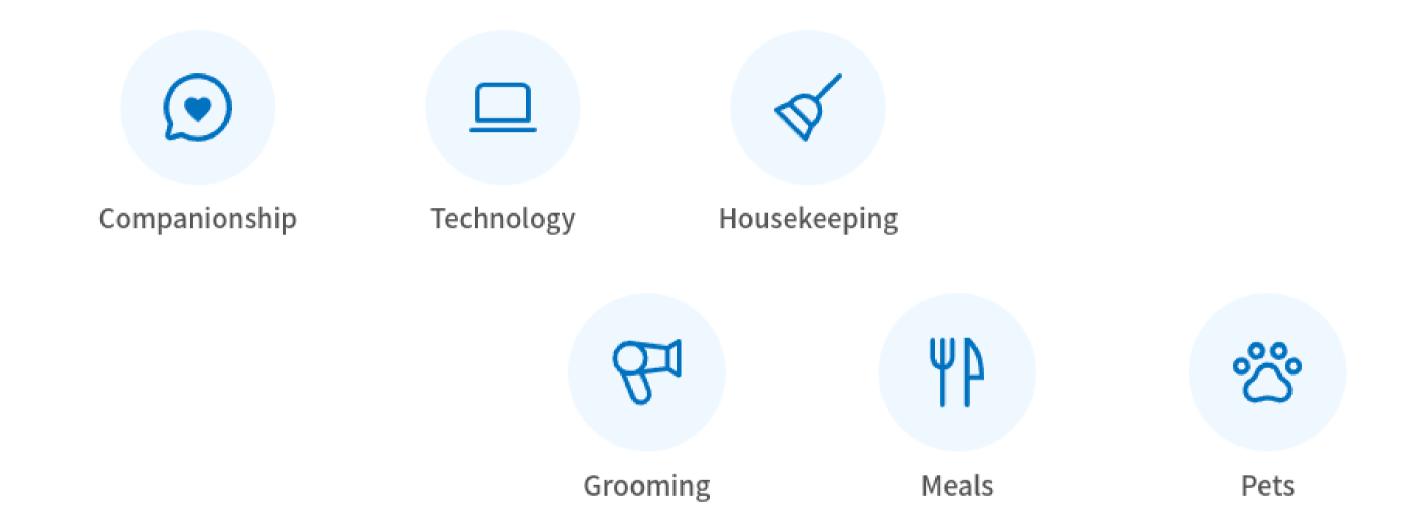
CareYaya built a tech-enabled caregiver registry for them.

Uber or DoorDash-like tech platform

- Students apply, create detailed profiles; are individually vetted
- Safety-first platform allows families to find student caregivers without exchanging personal information
- Students can see and choose from available opportunities to help local elders
- Students get paid 100% of what family pays;
 CareYaya charges no middleman fees



What do student caregivers help with?



Weekend & Overnight Care readily available with no surcharges Student caregivers love these opportunities as there's no overlap with their class schedules. And it's a big need for families.

Students are excited to join the platform...

from referrals by Professors & Pre-Health Advisors at universities we collaborate with



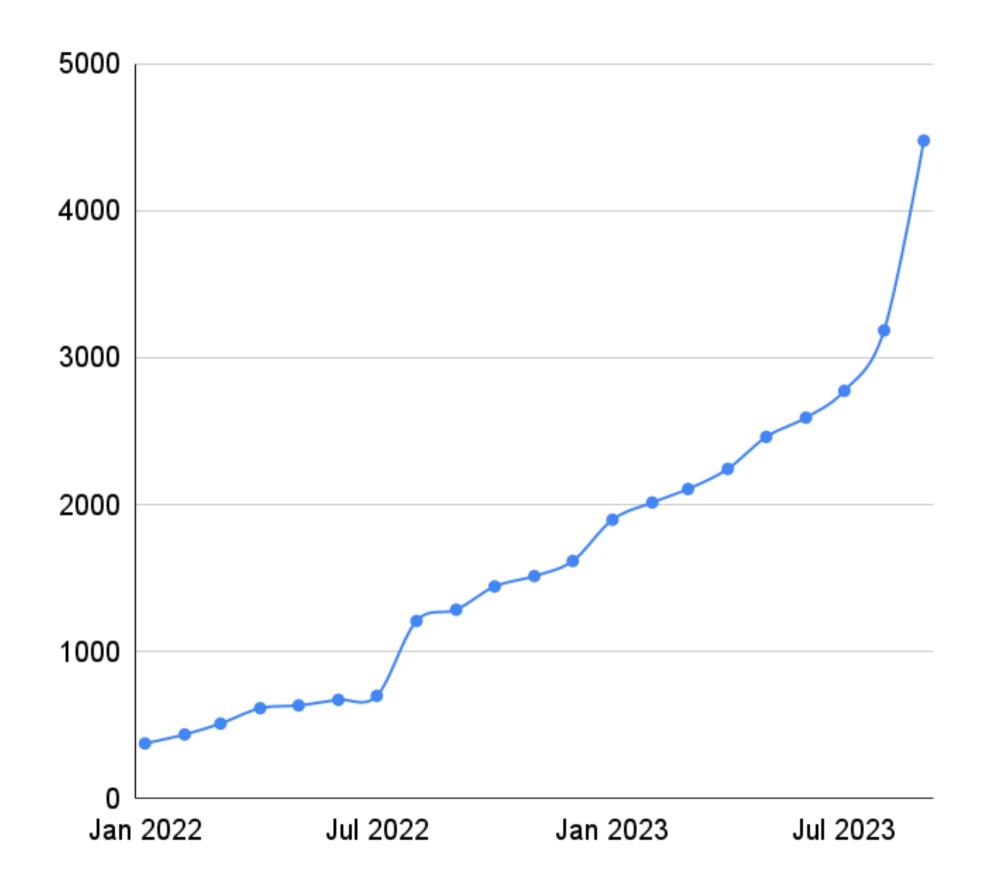




















A community of caring students



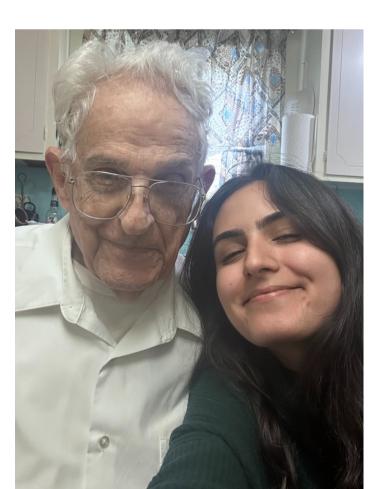


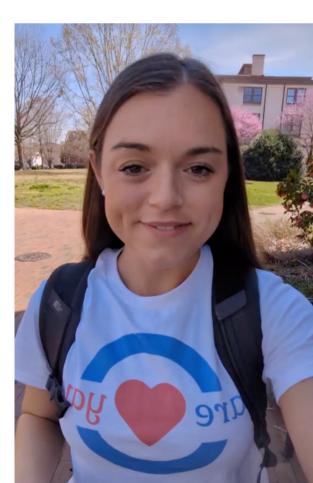




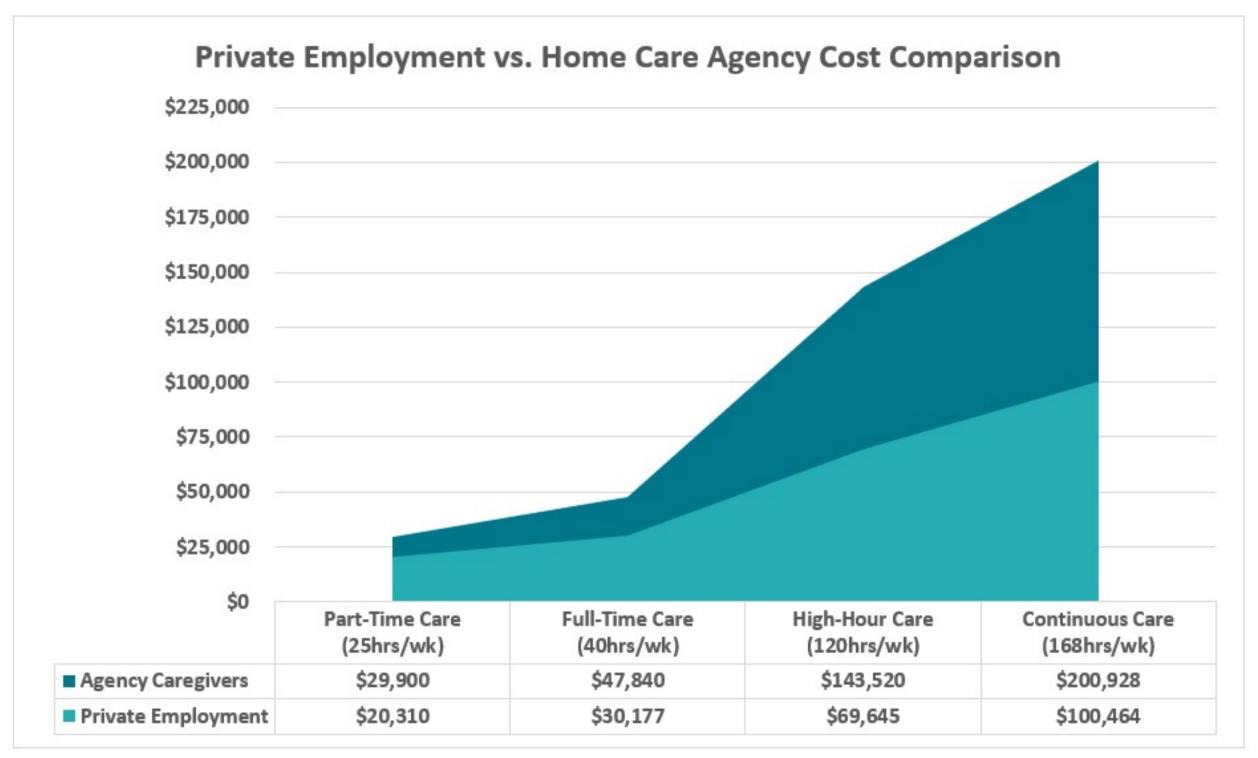








Private-duty care is most affordable (30-50% less than agency-based care)



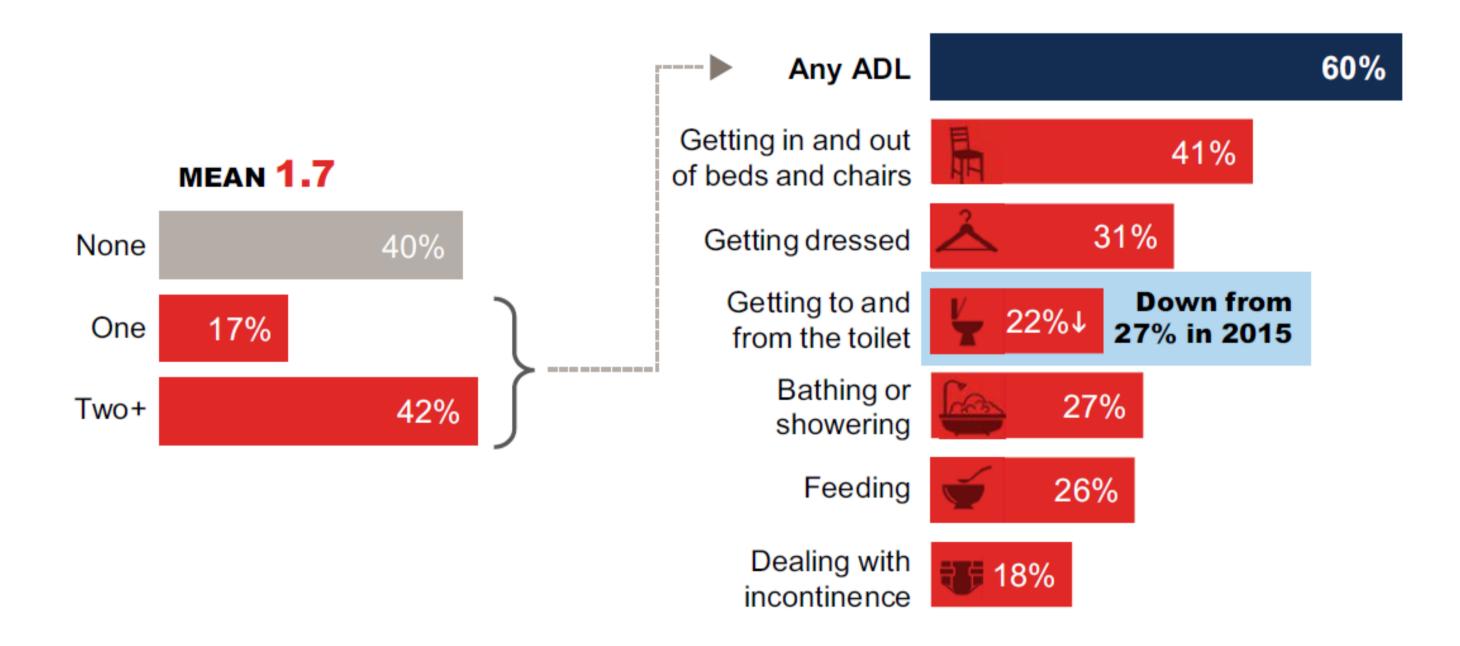
Affordability increases as care needs grow.

CareYaya.org is more affordable than any private duty care registry option (Care.com, etc.)

- Offers care opportunities when caregivers want to earn; and 100% of the funds go to the caregiver
- Pathway programs for health careers
- Average hourly rates to user are 20% lower than Care.com or informal care market, 40-50% lower than care agencies

People need more family.

Not everyone needs the skill set of a CNA.



College student caregivers solve the labor shortage for basic elder care.

Addressing Direct Care Workforce Shortage

119,000 Current Home Care Workforce in NC

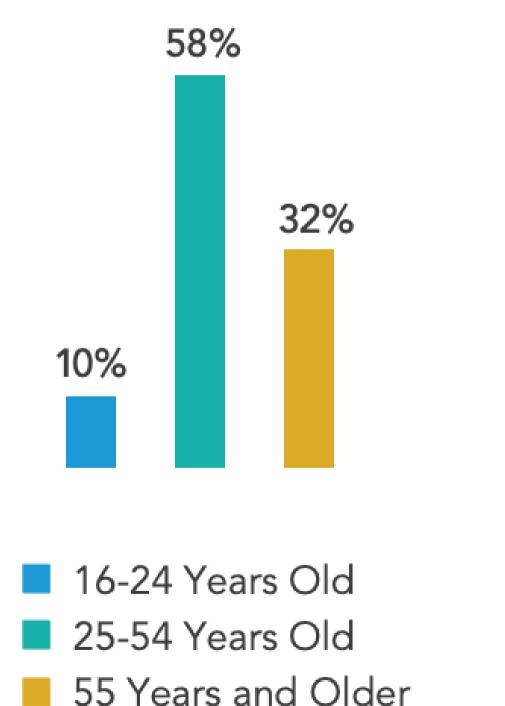
4,000+ Students Added Through CareYaya

75,000 Potential Pre-Health Careers Students

We Could Single-Handedly Make a Big Impact on the Workforce Shortages!

Opportunity to bring youth into the care workforce.

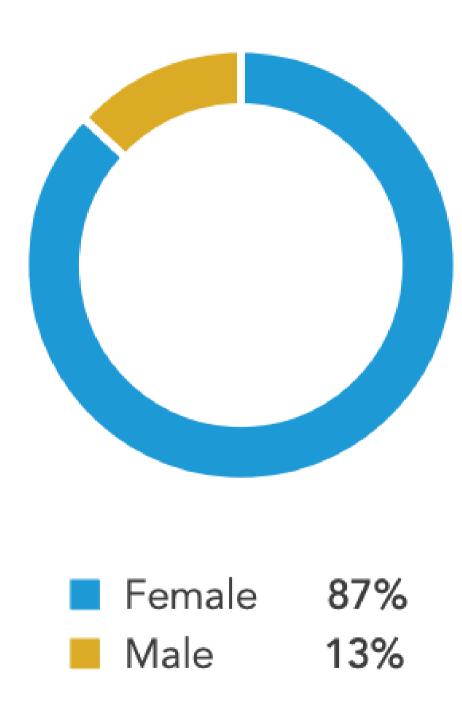
Care Workforce by Age Group



- Inter-generational relationships are valuable for elders and youth alike
- Upwardly mobile youth bring a positive approach to caregiving



Opportunity to destigmatize care jobs as "women's work" and bring males into the care workforce.

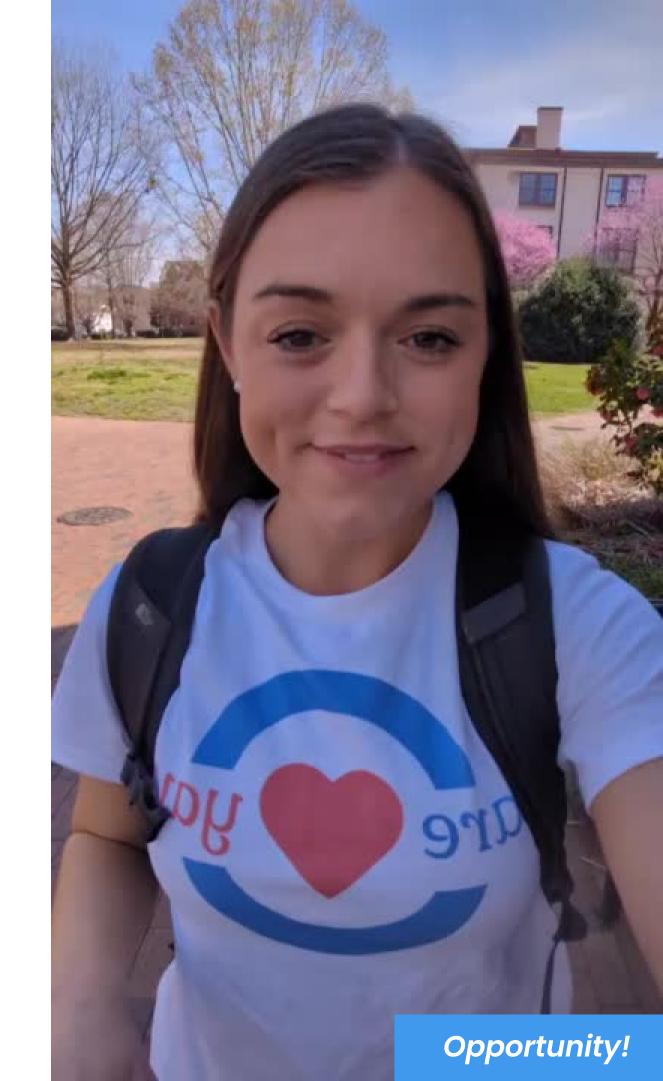


- Over 87% of home care workforce is women
- But men are equally capable in these roles; and should be encouraged in order to address the workforce shortages
- Younger generation is more open-minded



Workforce expansion: College student caregivers

- Non-monetary incentives; experience and upward mobility
- Ratings/reliability at industry highs
 - 4.7 out of 5 stars across 7,000+ sessions
 - 98%+ on-time rates
- Overnights & weekends at same low rates



Education Equity: Building the diverse healthcare workforce of tomorrow

- There is a growing shortage of healthcare workforce in North Carolina hospitals (Doctors, Nurses, Nurse Aides)
- Students that are minorities, from rural areas or lower socioeconomic backgrounds are discouraged from health careers

Compassionate people of diverse backgrounds who want to become a part of the health care system should have an equitable opportunity to do so.

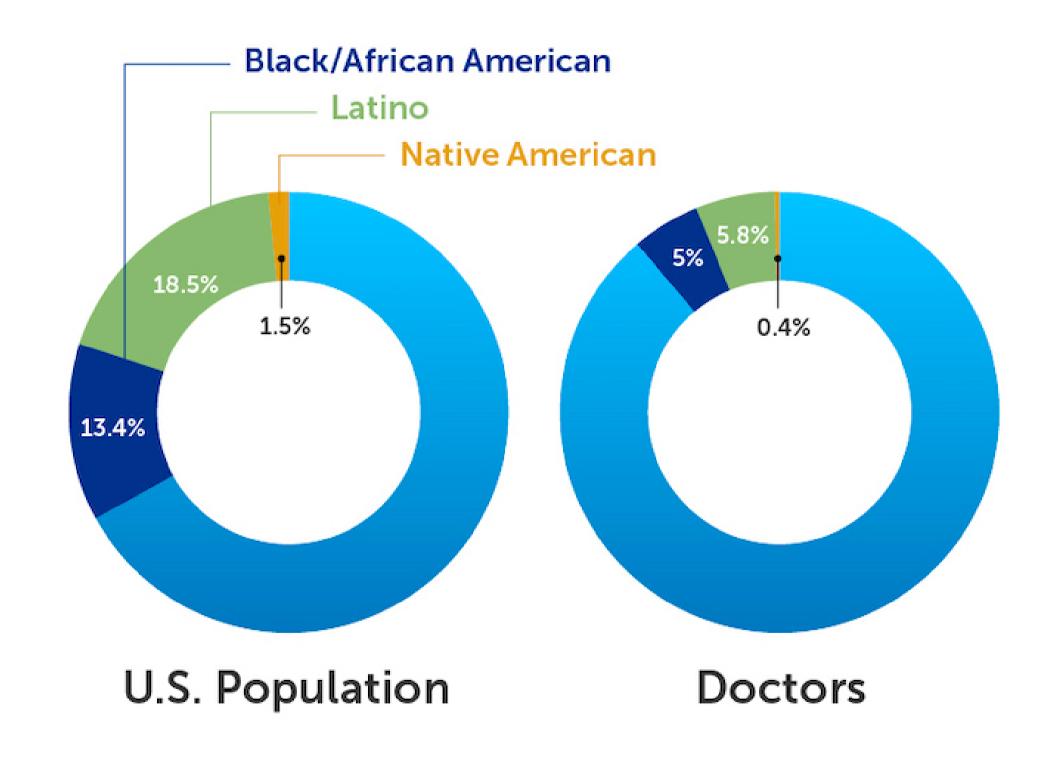
Pre-Health College Students

~75,000 across NC only 20% end up pursuing clinical careers

- Lack of paid care experience discourages students from less privileged backgrounds from pursuing health careers
- Expensive certifications (CNA, EMT) requirement at hospitals
- Fixed hours limit work during school year; forces gap years

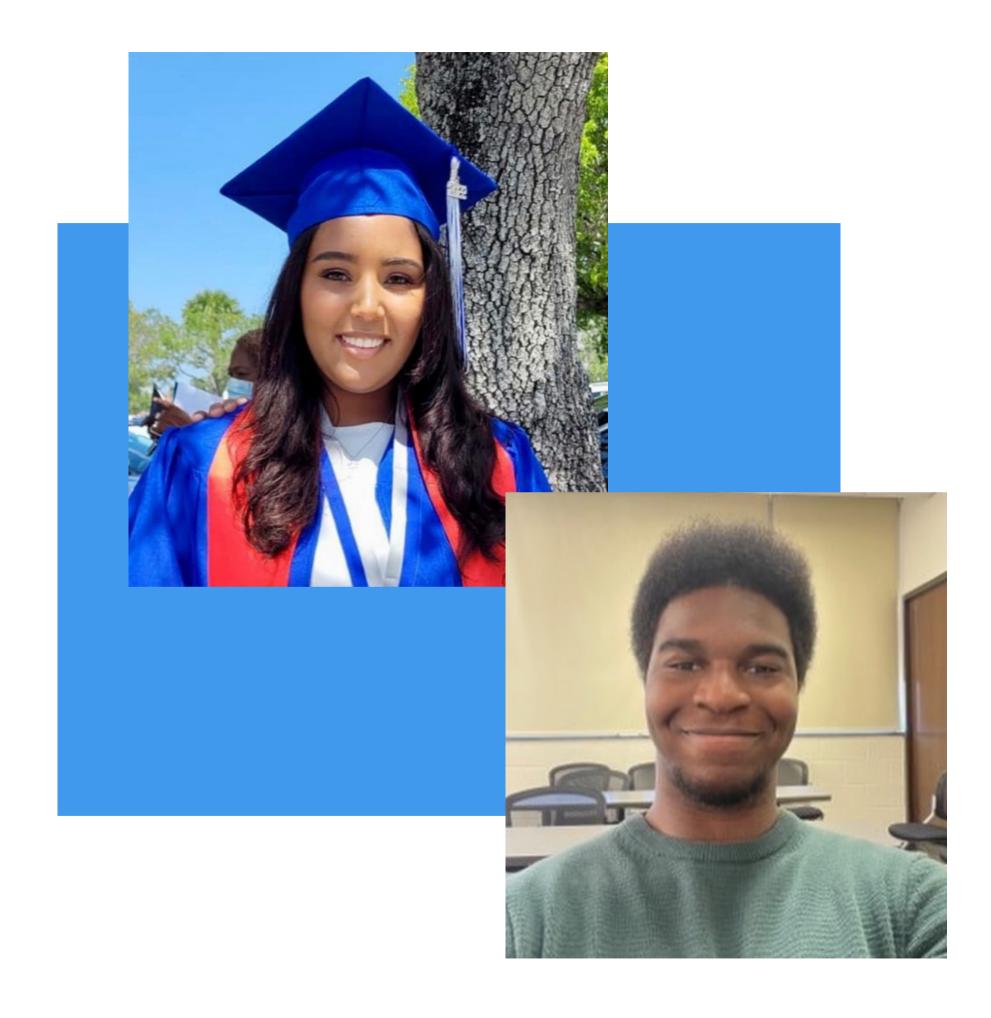
32% of the US population is Black or Hispanic

Less than 11% of doctors or nurses are Black or Hispanic



A match in patient and clinician ethnicity leads to greater reported satisfaction and more effective care

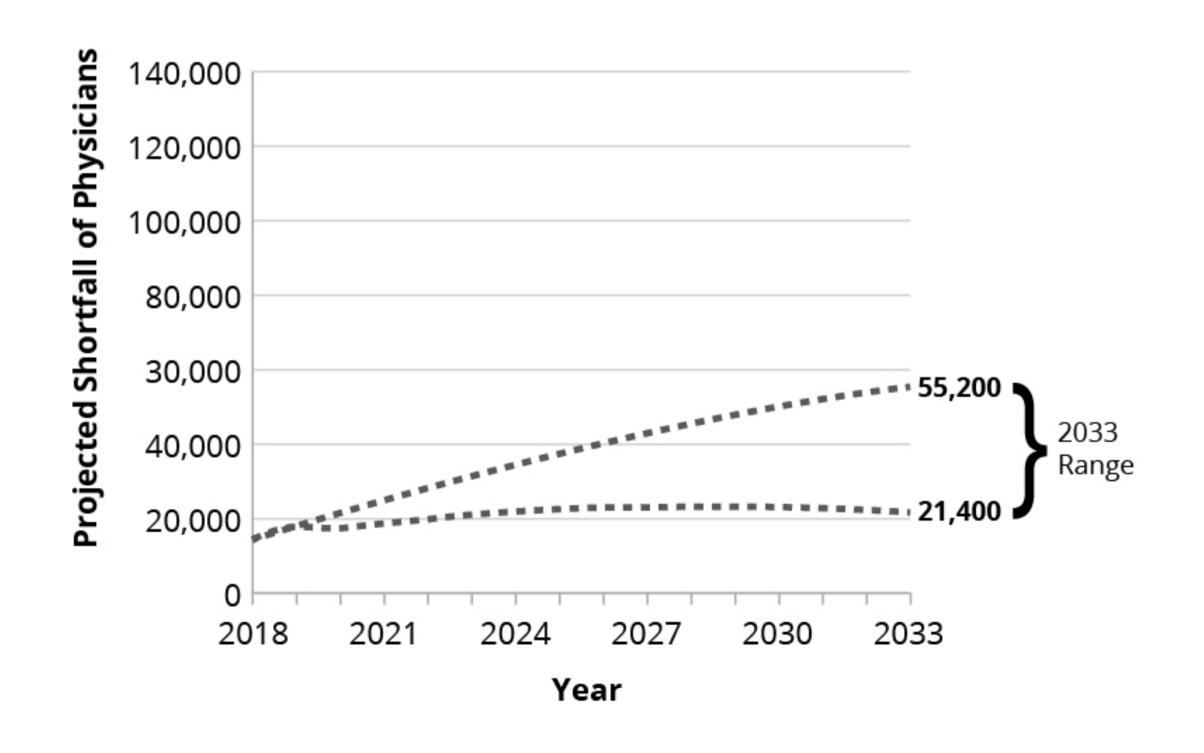
Lack of paid care experience limits access to health careers



Many students who start as pre-health <u>drop out</u>.

This is a wasted opportunity at a time of growing healthcare workforce shortages across society.

Shortage of healthcare workers will grow as our population ages and needs more care



A Diverse Health Care Workforce Can Help Improve Health

A more diverse health care workforce can improve and promote the following outcomes





Patient choice and satisfaction



Patient-clinician trust



Access to high-quality and culturally effective care

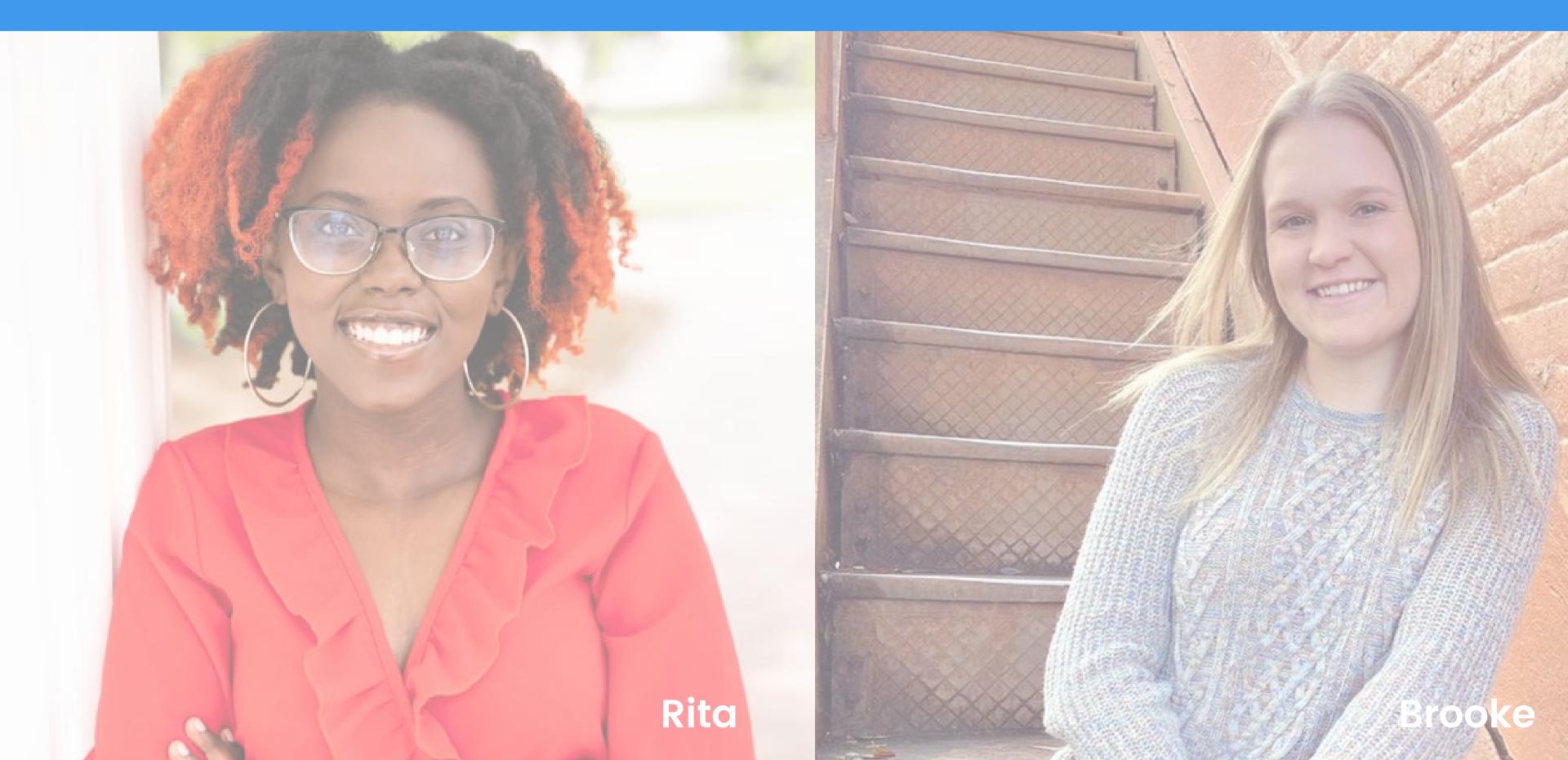


Diverse representation in leadership, policymaking, and research

Source: HHS Advisory Committee on Minority Health, <u>Reflecting America's Population: Diversifying a Competent Health Care Workforce for the 21st Century</u> (Washington, DC: US Department of Health and Human Services, Office of Minority Health, 2011).

Compassionate people of diverse backgrounds who want to become a part of the health care system should have an equitable opportunity to do so.

Let's create a Pathway Program!



CareYaya built a Pathway Program: "Care for America"

"Care for America"



Paid care experiences to fund undergraduate + save for graduate school



Scholarship opportunities for top caregivers (Rosenstock Fellowship)



Supplemental support and resources toward health careers



Letters of recommendation to graduate schools



Opportunities to shadow doctors, nurses and social workers

Building Intergenerational Relationships

- Beneficial for students' mental health
- Provides a sense of purpose and meaning
- Builds empathy and prepares them to be better healthcare workers
- Provides great experiences for graduate school applications

We are helping encourage thousands of students to pursue health careers.

The movement is spreading around the state!

T CARE ASSISTANTS AREYAYA

Shannon McBrien
NCSU Student
Alyssa





Families and health systems love CareYaya



"I'm saving over \$80 a day using CareYaya to help with my mother... it has saved my sanity!"

Lisa Levin



"The caregivers through CareYaya are the best I've seen in my ten years of managing care for my father who's suffering from Parkinson's. And, it feels as convenient as Uber!"

Scott Davey

We have several referral partnerships:











CareYaya in the News













- https://www.cbs17.com/my-carolina/in-home-care-with-careyaya/
- https://www.bizjournals.com/triangle/news/2023/01/20/careyaya-caregiving-startup-raleigh-durham-tech.html? b=1674216807%5E22192454
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- https://spectrumlocalnews.com/nc/triangle-sandhills/news/2022/11/29/caregiving-service-partners-with-nc-college-students-

Imagine the Future



Shifts payor responsibility

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Employers:
Employee Benefits /
Corporate Wellness Programs
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Insurance /
Medicare Advantage
Healthcare Systems

Government Policy
Support

Medicare

- Traditionally, payors have undervalued the psychosocial impact from home care and improved outcomes
- Mental, behavioral and clinical health improvement
- Home care industry assumed Medicare would never pay; so catered only to upper echelon of the population.
- Rates have climbed and climbed; population that can afford it has shrunk.

- We call it "non-medical" care
- But there's so much about health that happens at home
- When a caregiver moves your rug, so you don't fall
- Or is there in a moment of isolation, so you don't go back to the hospital.

Payors haven't valued it and now agency prices are too high

 Home care agencies have given up on the payor, so don't gather data or even approach payors to reimburse.

We could turn this model on its head!

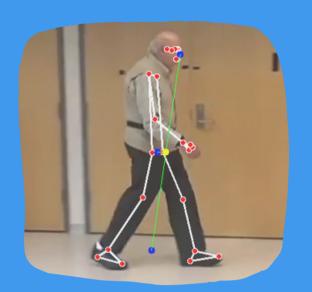
If you have a hands-on caregiver there at affordable rates.

 Collect robust data with technology, and see what it takes to drive improved health outcomes and reduce hospital visits.

Prove to the payor they've been missing out on this all along!

Cutting edge tech innovations to help elders age-in-place

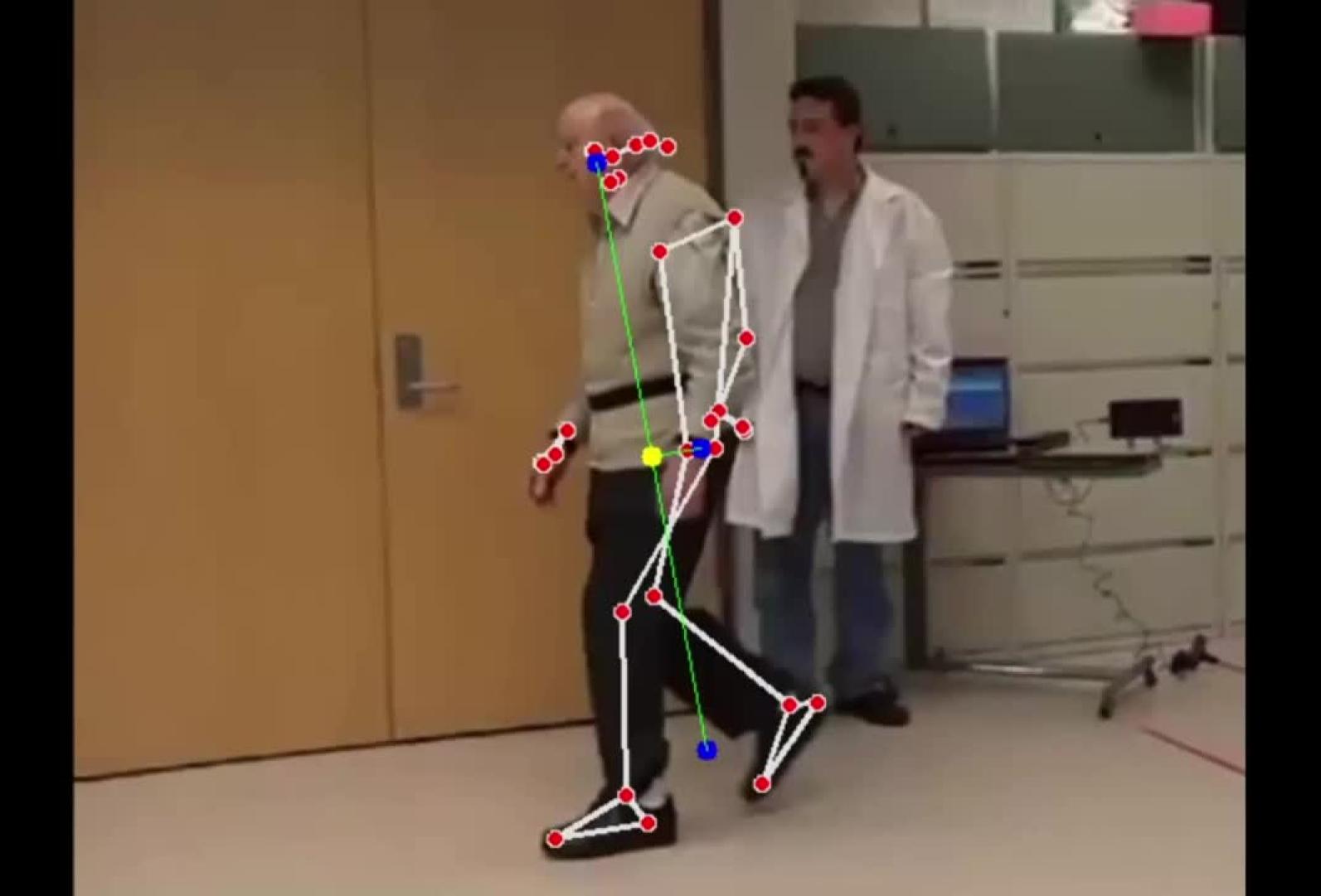
*In discussions with the National Institutes of Health (NIH) SBIR non-dilutive funding



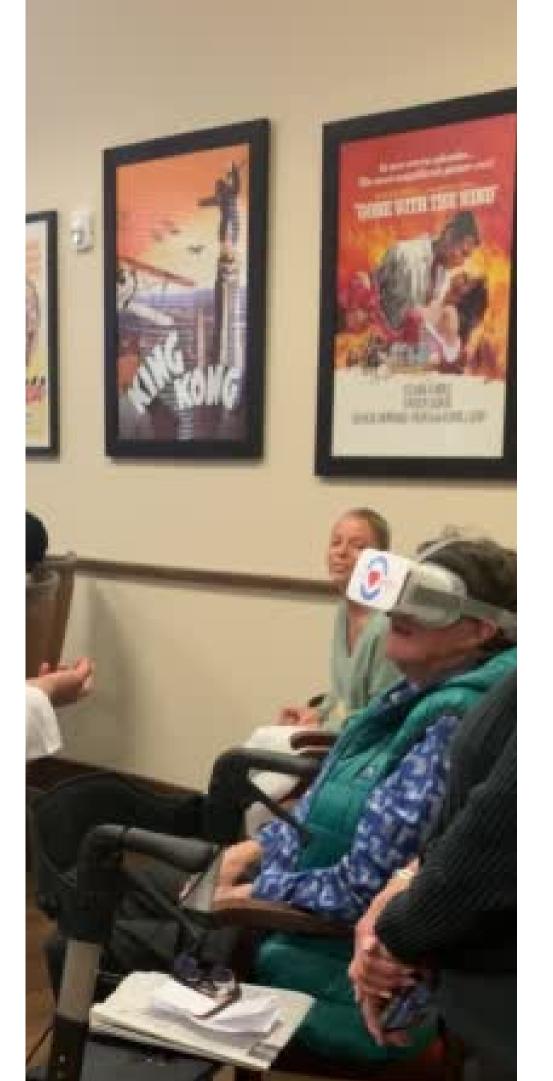
At-home fall prevention screening utilizing ML video analysis*



Low-cost, mobile dementia screening replacing costly neurology visits*









Changes the mindset of our younger generation







HERE'S WHY
CAREYAYA
JOYGIVERS LOVE
WHAT THEY DO









NEWS HEADLINES Stigation

How can you help?

- Let's create a workforce development program for these student caregivers!
- Build awareness with families who need care help
- Ease restrictions so we can offer student caregivers to assisted living and skilled nursing facilities



Building a Better Future for Care.

www.careyaya.org

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