



Aging in Place in America

Research Report
February 2020

Overview

The Aging in Place in America survey aims to establish the extent to which people think they will be able to age in their own homes or communities, why they want to age in place, and what factors could prevent them from being able to do so.

The survey captures the views of the U.S. public and key demographic groups of interest, as well as a focus on people with chronic kidney disease (CKD), other chronic health conditions, and caregivers.

As a leader in chronic disease care, Fresenius Medical Care North America (FMCNA) commissioned this research in order to understand more about the social determinants of health (SDOH) impacting people's livelihoods and hopes for aging.

In order to understand how they can better help the CKD community, this report also includes a deep dive on perceptions of CKD patients and CKD caregivers – how they hope to age in place, how SDOH affect their ability to age in place, and what specific barriers they need to overcome to make this happen.

The statistics in this survey are based on the self-reported answers of 2,750 U.S. adults aged 18 years or older. The interviews were conducted in an online survey, in English, from Aug. 9-20, 2019. The sample included 2,000 U.S. adults representative of the online general public in terms of age, gender, and region. Additionally, a sample of 500 CKD patients and 250 CKD family caregivers were included.



Statistically significant differences, at the 95% confidence level, are denoted by arrows.

Report contents

3	Introduction
6	Executive summary
25	Further information on the research
28	Appendix
29	Detailed findings
65	Focus on chronic kidney disease (CKD) patients
80	Focus on caregivers
89	Sample profile



Bill Valle

**Chief Executive Officer of Fresenius Medical Care North America
President of the Fresenius Medical Care Foundation**

“We wanted to explore the perceptions of aging in place and uncover barriers, including social determinants of health and misperceptions around feasibility. Given an aging population and an increase in chronic disease, innovations that help more people remain in their homes for longer will be welcomed by patients and the health system alike.

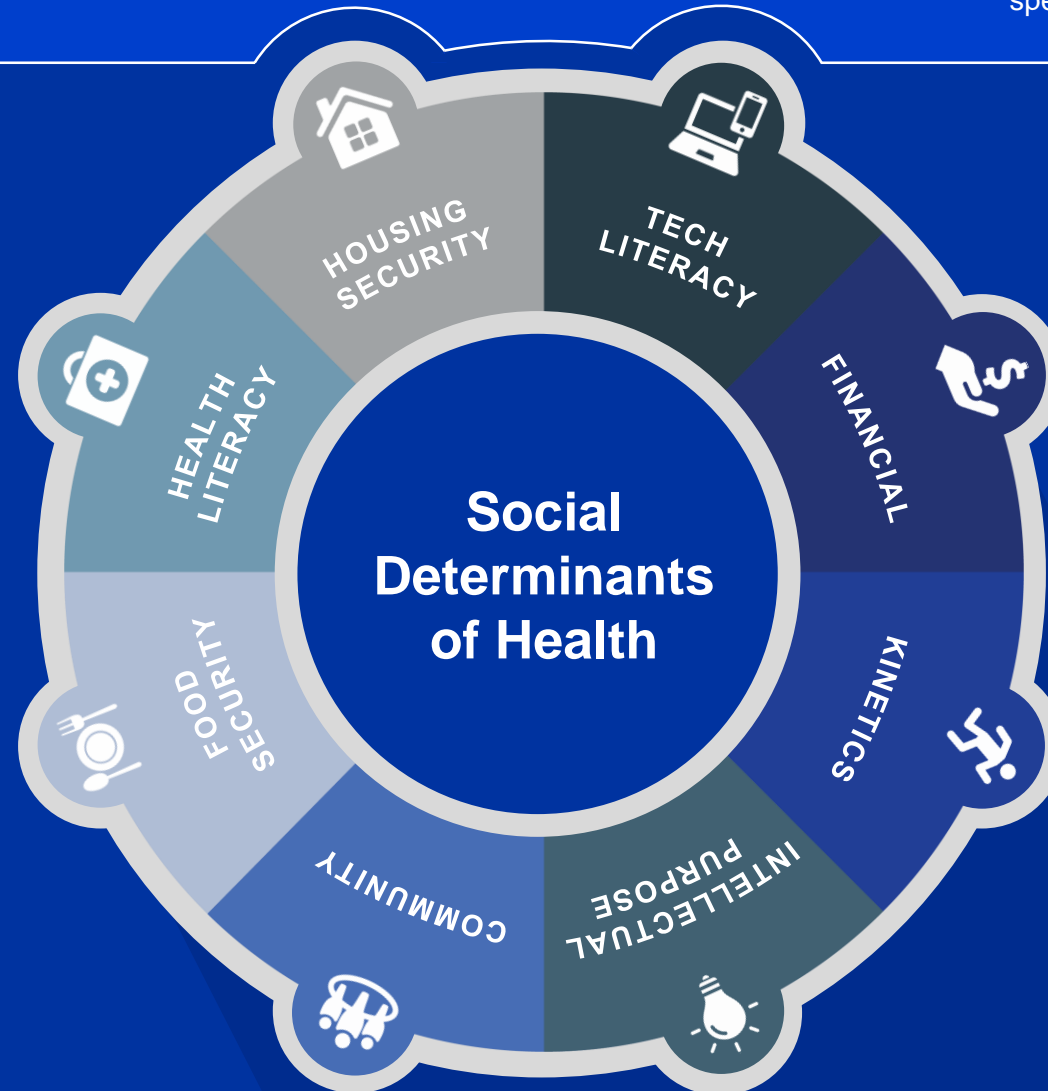
The role of family caregiving in helping those with chronic diseases, including chronic kidney disease, age in place while receiving quality care and support is also of critical importance going forward. Fresenius Medical Care North America is committed to identifying solutions for chronic disease patients and their caregivers and believes a dialogue about work underway and still to be done is a key step toward achieving the goal of more seniors aging in place.

It is important for the healthcare community to commit to creating a future where older adults can age on their own terms and remain in control of their circumstances to the best of their ability. This is why we are moving beyond providing clinical care and toward support of overall societal shifts that allow individuals to thrive in the setting where they feel most comfortable.”

SDOH in this survey

A guide to the SDOH investigated in the Aging in Place in America survey.

SDOH can be broken down into eight categories, each measured by four specific statements self-rated on a 4-point agreement scale.



Difficulty keeping up with home maintenance

Do not have enough space to live comfortably

Do not live in a stable home

Do not live in a safe and comfortable home

Have trouble understanding doctors' advice

Do not regularly monitor health

Difficulty understanding medical information

Difficulty in knowing where to find health information

Skip meals/reduce meal size for budget

Not eating nutritious meals most days

Not able to cook fresh meals most days

Do not have access to nutritious foods

Do not feel belonging in community

Do not feel safe in community

Do not have strong social support network

Lack access to public spaces or events in community

Do not communicate online with my doctor/pharmacy

Struggle to use new technology

Not accessing the internet on my mobile phone

Not managing bills online

Not saving money for the future

Do not have disposable income for non-essentials

Do not pay bills on time (i.e. gas, phone, credit card)

Do not have enough for everyday expenses

Not physically fit and active

Not walking in everyday life

Do not get 15+ mins. of exercise every week

Struggle physically doing household tasks

Lack purpose and direction

Not able to work and earn a living

Not learning and developing skills

Do not make independent decisions

EXECUTIVE SUMMARY

Executive Summary

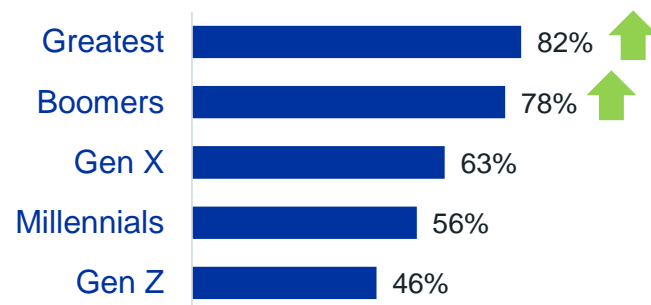
- ① **Aging in place in America: social barriers are significant.**
- ② **SDOH create additional challenges for caregivers.**
- ③ **CKD patients are more likely to want to age in place, but express concerns about quality of home care.**

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**Aging in place in America:
social barriers are
significant.**

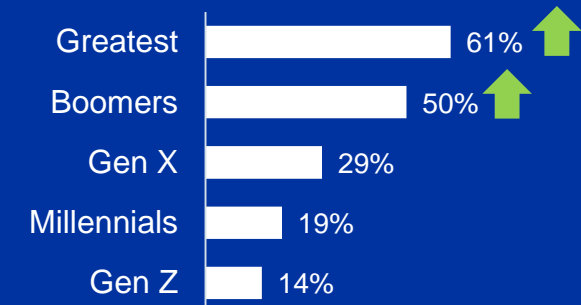


65% of Americans surveyed say aging in place **is a goal of theirs.**



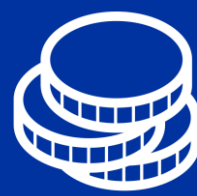
BUT ONLY

33% believe they will.



Barriers to the perceived ability to age in place are both functional and emotional.

Functional barriers to aging in place



29%

of Americans say
“I would not have enough money to age in place.”



24%

of Americans say
“My home is not suitable for the elderly.”

Emotional barriers to aging in place



19%

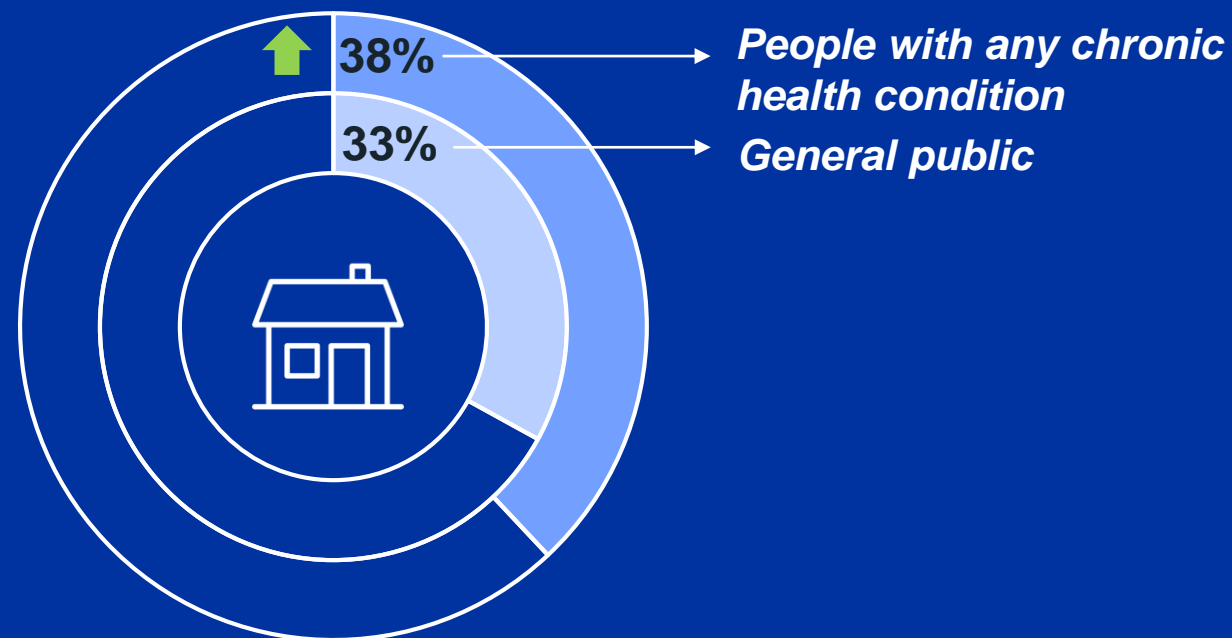
of Americans say
“I would feel alone.”



17%

of Americans say
“I would not be near friends and family.”

People with chronic health conditions are more likely to believe they will age in place than the general public.



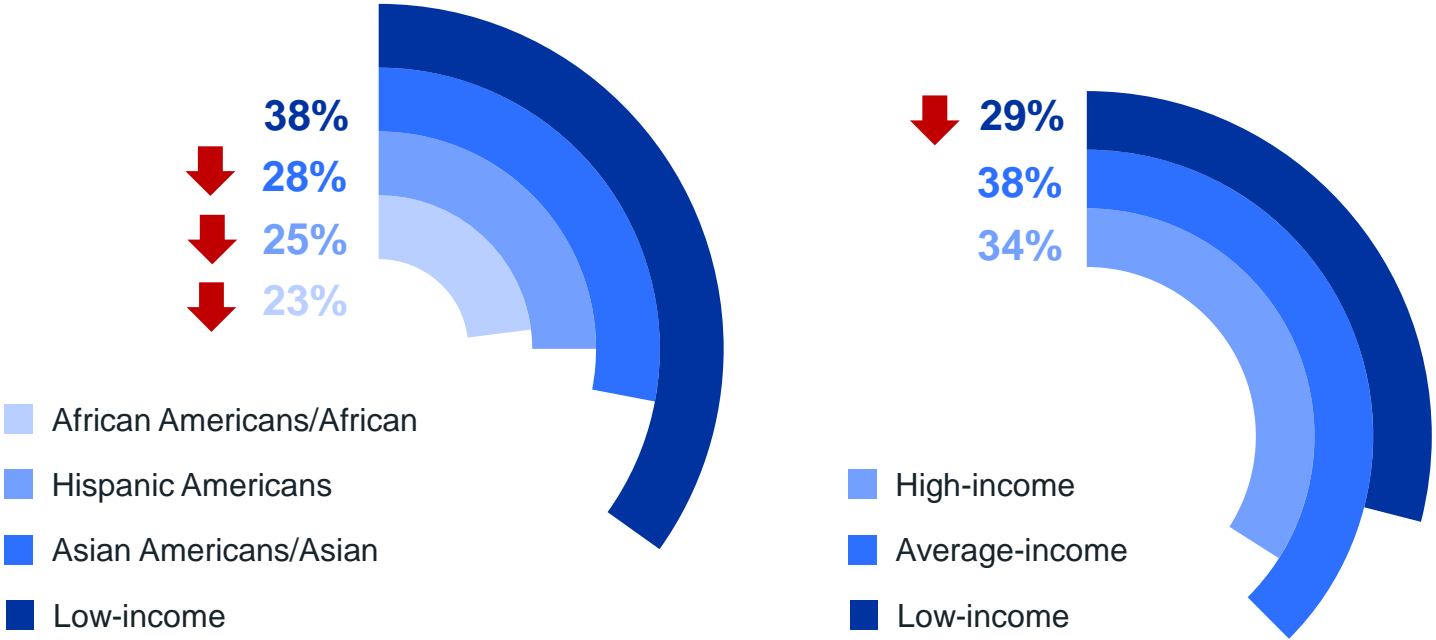
say they **will live in the same home** as they grow older



Lack of health literacy – an SDOH that significantly impacts a person's ability to age in place – **affects fewer of those living with chronic conditions** (39%) compared to the general public (47%). Patients with chronic conditions are likely to have more frequent touchpoints with the healthcare system.

Racial and ethnic minorities and lower-income individuals are less likely to think they can age in place.

U.S. general public



believe they will age in place











Racial and ethnic minorities and lower-income individuals also have a **disproportionately higher number** of SDOH that negatively impact their lives.

Beyond physical fitness and financial health, lack of purpose, community, and tech skills are common SDOH challenges.

U.S. general public

Types of SDOH – among the general public
% affected by types of SDOH

	 TECH LITERACY	 FINANCIAL	 KINETICS	 INTELLECTUAL PURPOSE	 COMMUNITY	 FOOD INSECURITY	 HEALTH LITERACY	 HOUSING SECURITY
% affected by SDOH type	66%	64%	60%	55%	55%	50%	47%	46%
% affected by each statement	48% Do not communicate online with my doctor/pharmacy	44% Not saving money for the future	40% Not physically fit and active	43% Lack purpose and direction	34% Do not feel belonging in community	33% Skip meals/reduce meal size for budget	25% Have trouble understanding doctors' advice	38% Difficulty keeping up with home maintenance
	25% Struggle to use new technology	43% Do not have disposable income for non-essentials	31% Not walking in everyday life	22% Not able to work and earn a living	20% Do not feel safe in community	26% Not eating nutritious meals most days	21% Do not regularly monitor health	10% Do not have enough space to live comfortably
	19% Not accessing the internet on my mobile phone	34% Do not pay bills on time (e.g. gas, phone, credit card)	29% Do not get 15+ minutes of exercise every week	8% Not learning and developing skills	20% Do not have strong social support network	13% Not able to cook fresh meals most days	18% Difficulty understanding medical information	8% Do not live in a stable home
	11% Not managing bills online	20% Do not have enough for everyday expenses	26% Struggle physically doing household tasks	6% Do not make independent decisions	15% Lack access to public spaces or events in community	6% Do not have access to nutritious food	5% Difficulty in knowing where to find health information	7% Do not live in a safe and comfortable home

People experiencing more SDOH challenges are significantly less likely to think they will age in place.

Likelihood of aging in place



Impact of SDOH on whether people will age in place

47%

33%

24%



Affected by 2 or less types of SDOH



Affected by 3-5 types of SDOH

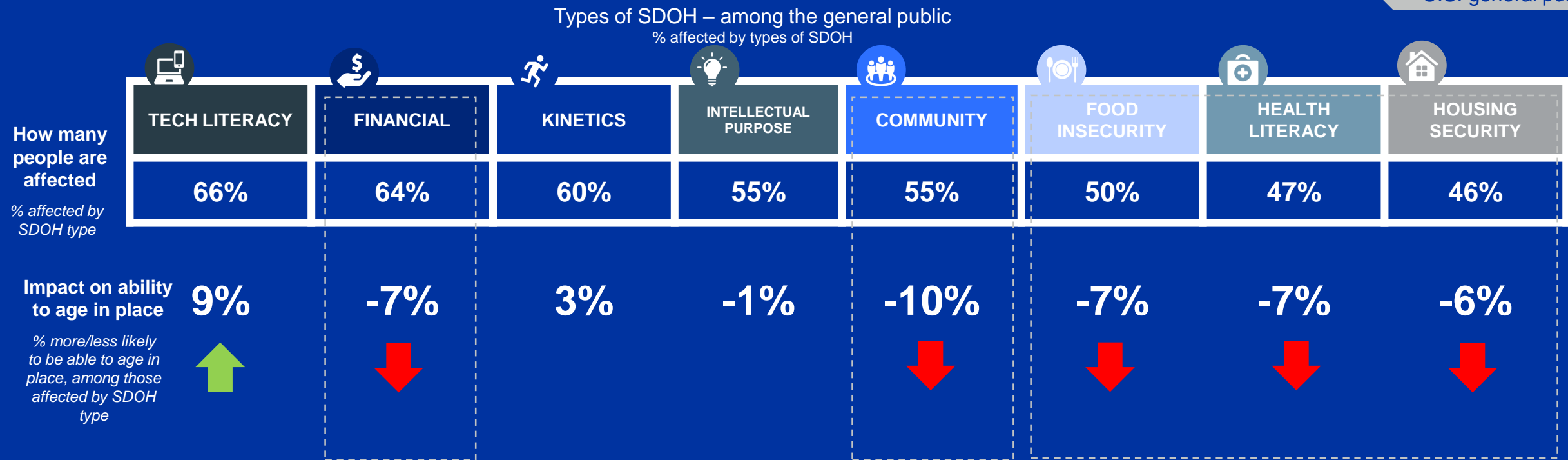


Affected by 6+ types of SDOH



Beyond physical fitness and financial health, lack of purpose, community, and tech skills are common SDOH challenges.

U.S. general public



Financial challenges are the most common SDOH that have an impact on a person's ability to age in place (64%).



Community health has the strongest negative impact on one's ability to age in place (-10%), among those affected.

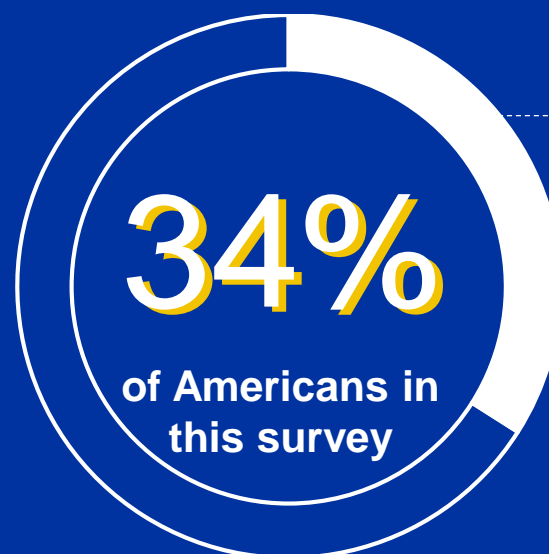


Food insecurity, health literacy, and housing security affect fewer people, but those affected are significantly less likely to age in place.

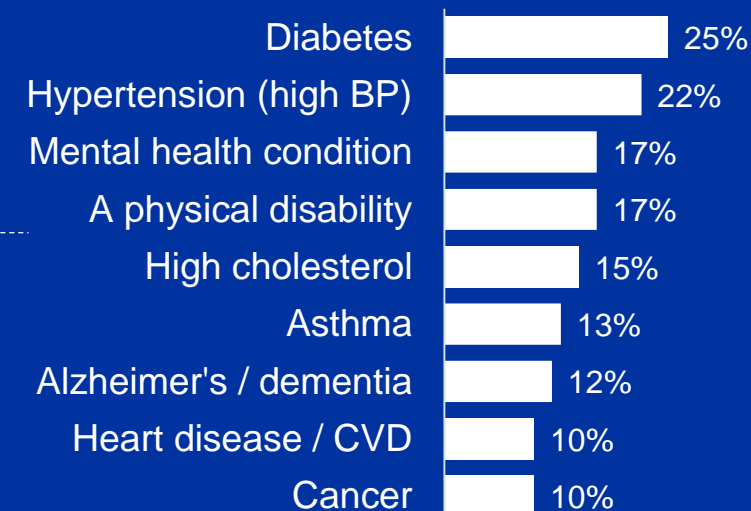
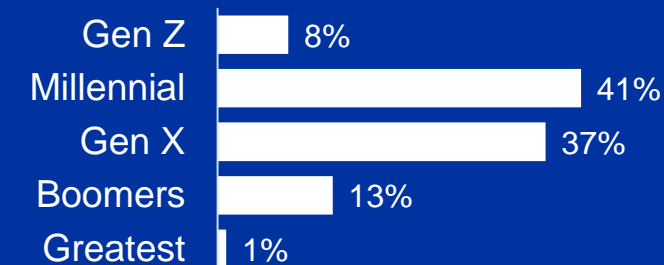
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SDOH create additional challenges for caregivers.

With the aging population in the U.S., the role of caregivers is crucial.



are caring for a family member with a **chronic health condition.**



Focusing on CKD specifically, most CKD caregivers think their loved one's goal to age in place is unrealistic.

86%

of CKD caregivers



think the adult they care for **has a personal goal to age in place,**

vs. 65% of the U.S. general public say aging in place is a goal

BUT ONLY

58%

of CKD caregivers



think the adult they care for **will age in place.**

vs. 33% of the U.S. general public thinks they will age in place



CKD caregivers are more likely to say aging in place is a goal for their loved one than the general public is.

The pattern is the same.

Caregivers worry that CKD patients won't be able to get the specialized care they need in their own home.



53% of CKD caregivers

say the adult they care for would not be able to age in place because they would need **specialized healthcare and support.**

vs. 21% of the U.S. general public says aging in place is a goal



48% of CKD caregivers

say the adult they care for would not be able to age in place because they **wouldn't be able to cope with everyday needs.**

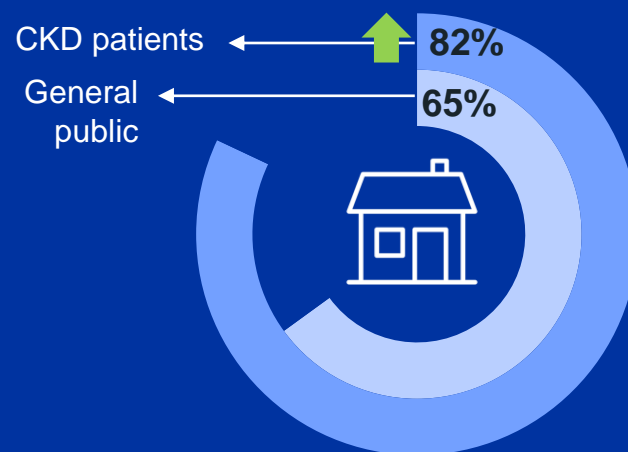
vs. 23% of the U.S. general public says aging in place is a goal

3

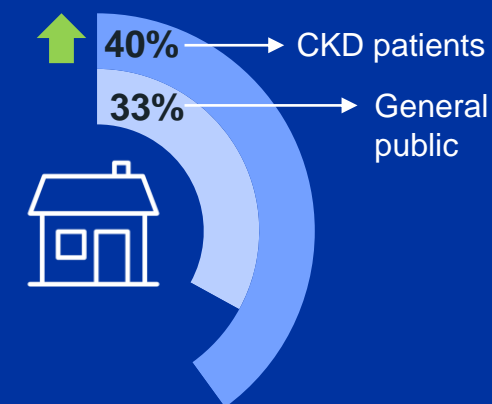
CKD patients are more likely to want to age in place, but express concerns about quality of home care.

CKD patients are more likely to want to age in place than the general public. Yet, only half of these CKD patients actually believe they can.

Home is even more important to CKD patients, compared to the general public.



BUT ONLY

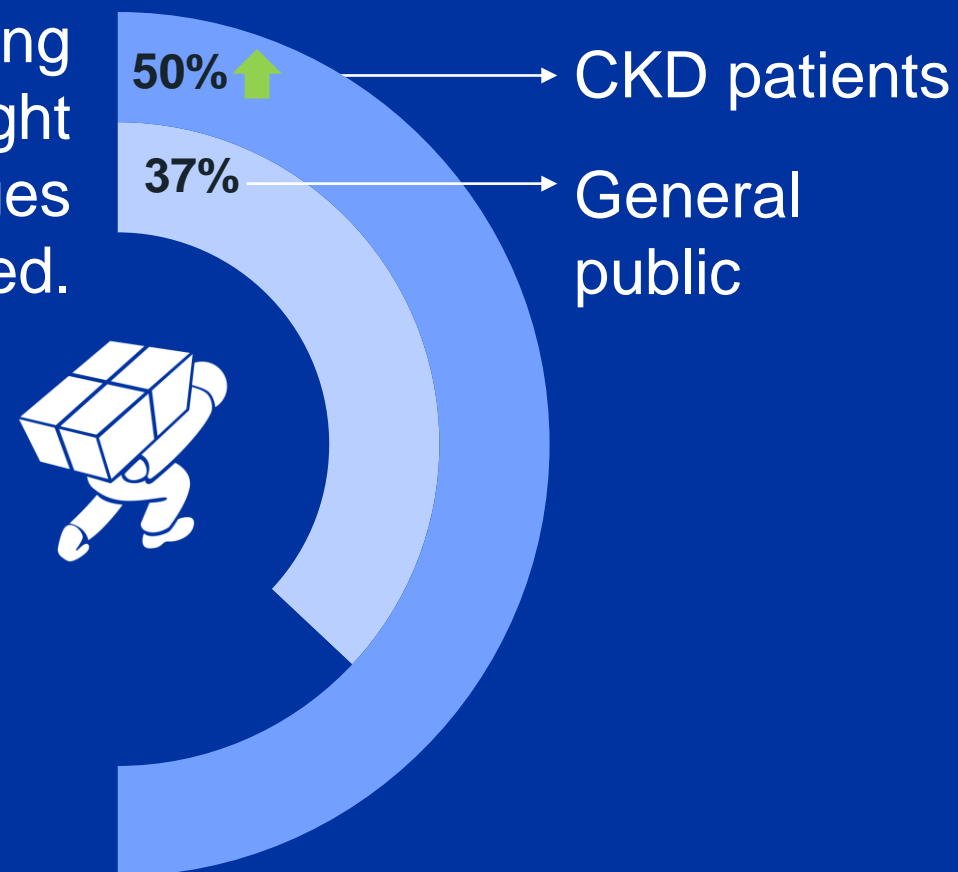


say aging in place is a **goal of theirs,**

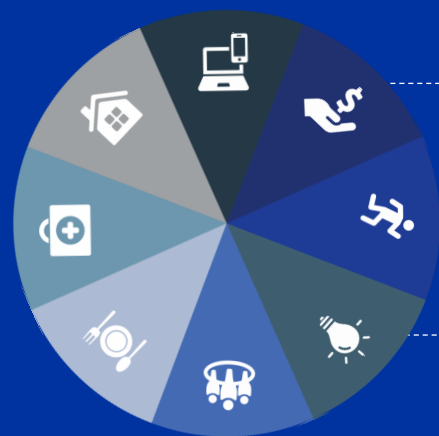
say they **will live in the same home** as they grow old.

**Unsurprisingly,
CKD patients
index extremely
high on multiple
SDOH.**

People experiencing
six to eight of the eight
SDOH challenges
measured.



Kinetics, financial concerns, and intellectual purpose are the main SDOH facing CKD patients, all of which impact their plans to age in place.



75% of CKD patients
are affected by **financials**
versus 64% of the U.S. general public.



85% of CKD patients
are affected by **kinetics**
versus 60% of the U.S. general public.



73% of CKD patients
are affected by **intellectual purpose**
versus 55% of the U.S. general public.

Dialysis patients currently believe the quality of care is better in a clinic or hospital setting than with home dialysis.



50% of dialysis patients

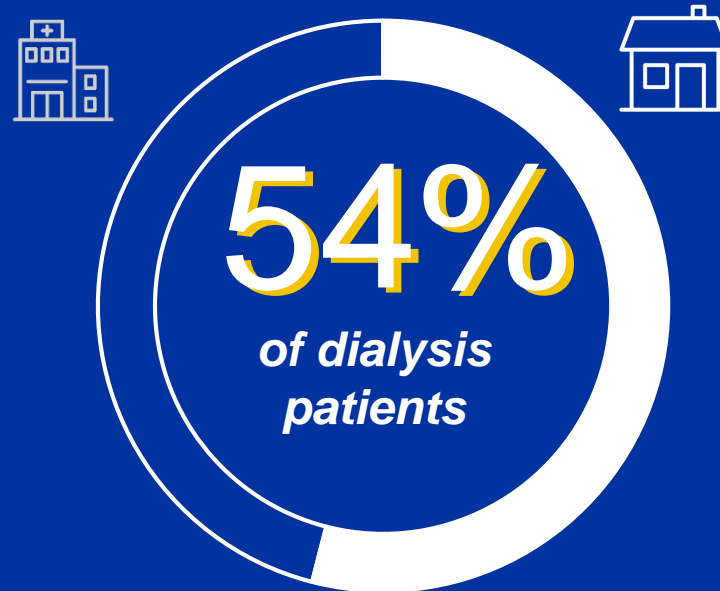
believe the quality of care would be better for people having dialysis in a **clinic or hospital.**



25% of dialysis patients

believe the quality of care would be better for people having dialysis in their **own home.**

There is strong interest among dialysis patients for home dialysis if the quality of care is the same as in clinic and hospital settings.



If they believe the same type of quality of care was found in home, in clinic, or in hospital settings,
54% would choose home dialysis.

**Further information
on the research**

About the Aging in Place Survey

About the survey

This report outlines the findings from a survey conducted by Edelman Intelligence, an independent market research firm, on behalf of Fresenius Medical Care North America. A sample of 2,750 U.S. adults aged 18 years or older were interviewed online, in English, during Aug. 9-20, 2019. For more information, please visit www.fmcna.com/aging-in-place.

Audiences surveyed

- **2,000** U.S. adults nationally representative of the online general public in terms of age, gender, region and income
- **500** U.S. “CKD patients” who are adults with kidney disease at any stage (**166** CKD patients in the sample are currently on dialysis)
- **250** U.S. “CKD caregivers” of a friend or family member diagnosed with CKD (**104** of the U.S. “CKD caregivers” look after a patient currently on dialysis)

Margin of error

- General population +/- 2.2% at the 95% Confidence Level
- CKD patients +/- 4.4% at the 95% Confidence Level
- CKD caregivers +/- 6.2% at the 95% Confidence Level

About Edelman Intelligence

Edelman Intelligence is a global, full-service market insights and analytics firm that provides corporate, non-profit and government clients with strategic intelligence to make their communications and engagements with stakeholders the smartest they can be. The firm specializes in measurement, tracking and analysis in reputation, branding, and communications. Edelman Intelligence is part of Edelman, the world’s largest public relations company. Edelman Intelligence has more than 200 employees and 12 offices around the world.

For further information, please visit www.edelmanintelligence.com

About Fresenius Medical Care

About Fresenius Medical Care North America

Fresenius Medical Care North America (FMCNA) is the premier healthcare company focused on providing the highest quality care to people with renal and other chronic conditions. Through its industry-leading network of dialysis facilities, outpatient cardiac and vascular labs, and urgent care centers, Fresenius Medical Care North America provides coordinated healthcare services at pivotal care points for hundreds of thousands of chronically ill customers throughout the continent. As the world's largest fully integrated renal company, it offers specialty pharmacy and laboratory services, and manufactures and distributes the most comprehensive line of dialysis equipment, disposable products, and renal pharmaceuticals.

For more information, visit the FMCNA website at <https://fmcna.com>.

For more information on the detailed survey findings and how FMCNA is beginning to address barriers to aging in place, please visit www.fmcna.com/aging-in-place.

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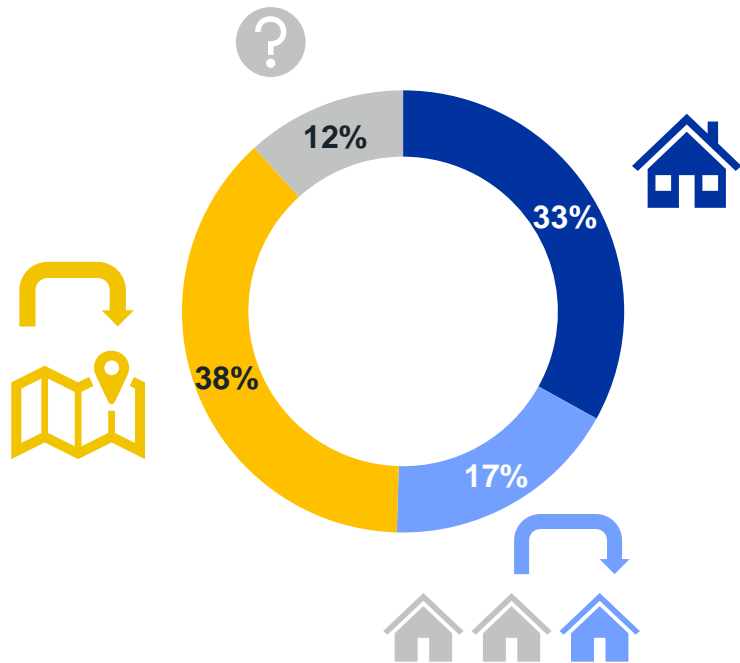
(781) 699-3331

APPENDIX

Detailed findings

Current plans on where to age in place

- Stay in the same home
- Stay in the same area, but move into a different home
- Move to a different area
- Don't know



Only one in three think they will actually grow older in their current home.

ONLY

33%

think they will live in the same home as they grow older.

AN ADDITIONAL

17%

think they will live in the same community/area, but move to a different home.

Q14. Do you think you will stay in the same community or move elsewhere as you grow older?

Q15. And, where do you plan to live as you grow older?

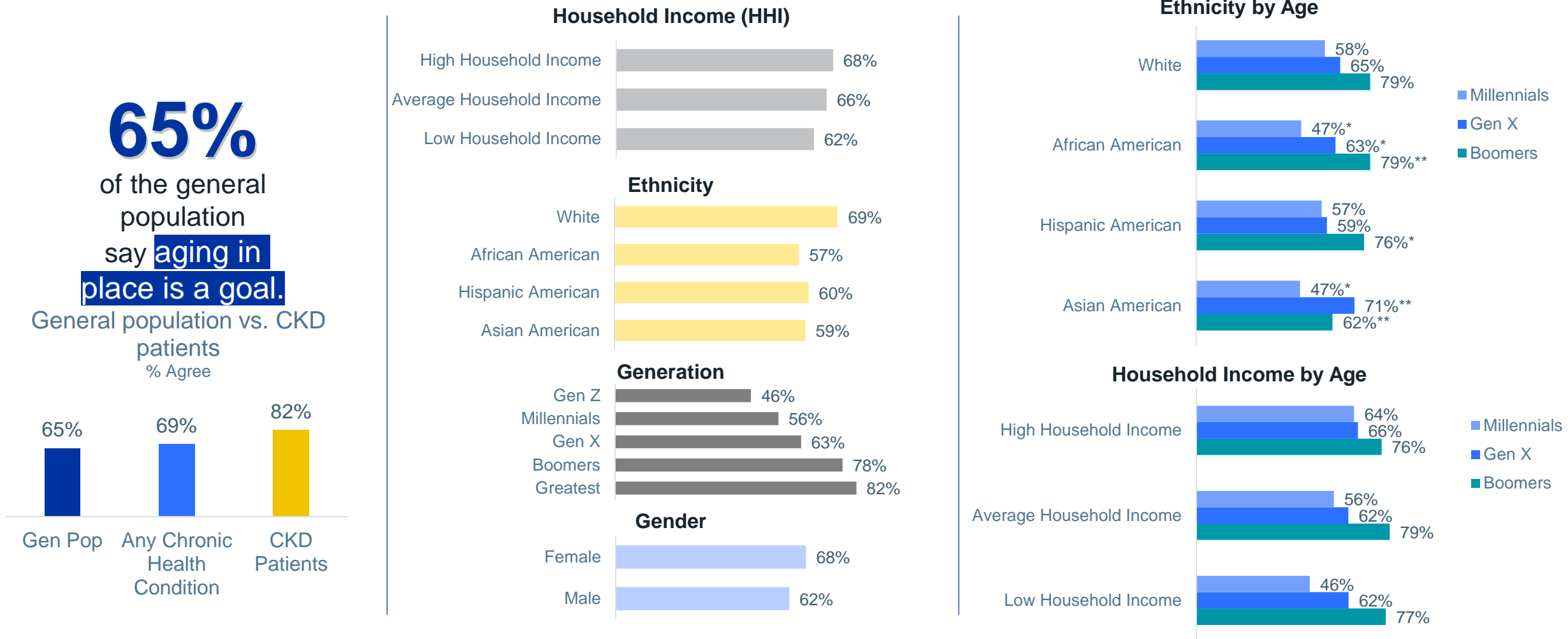
Base: U.S. General public – 18+ (n=2,000), CKD patients (n=500)

Q15. And, where do you plan to live as you grow older? |

Q19. Which of the following words or phrases best describes your view of “aging in place”?

Base: U.S. General public – 18+ (n=2,000)

Additional profiles: 'Aging in place is a goal' across different demographics



Q19: Which of the following words or phrases best describes your view of "aging in place"? | Base: U.S. General public – 18+ (n=2,000), CKD patients (n=500), Gen Z n=177, Millennials n=560, Gen X n=519, Boomers n=637, Greatest Gen n= 107

* Warning small sample size ** Warning very small sample size

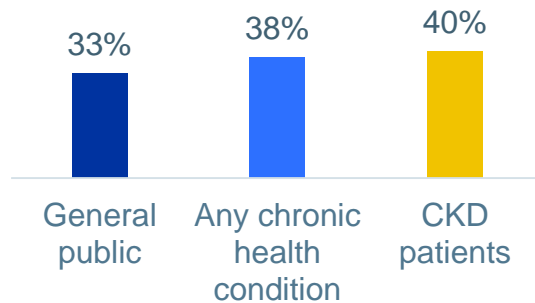
Additional profiles: 'Will age in place' across different demographics

33%

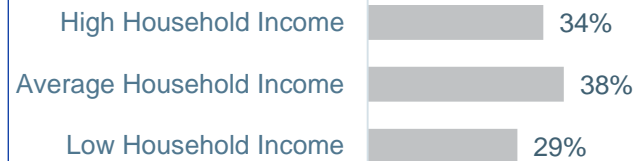
of the general
public

think they will age
in place.

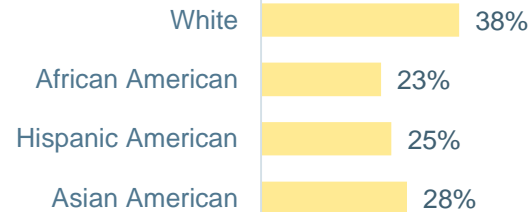
General public vs. CKD patients
% agree



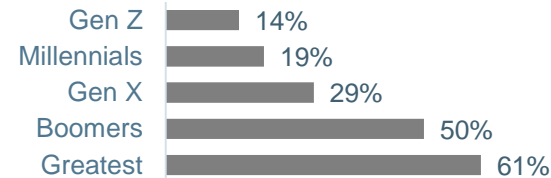
Household Income



Ethnicity



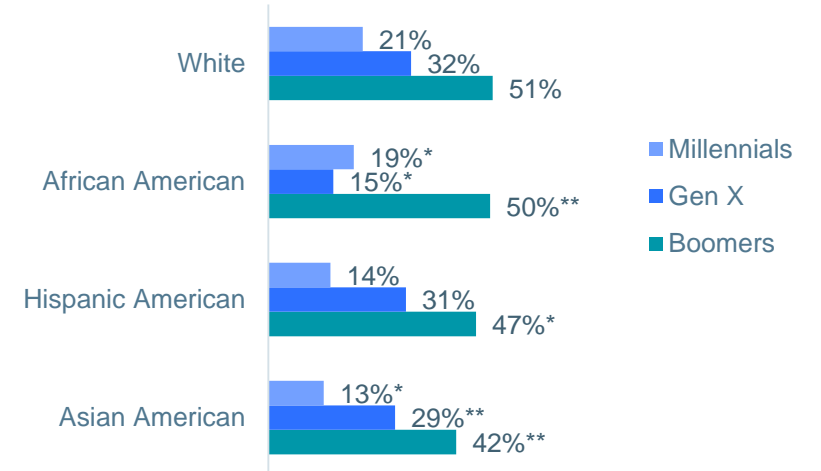
Generation



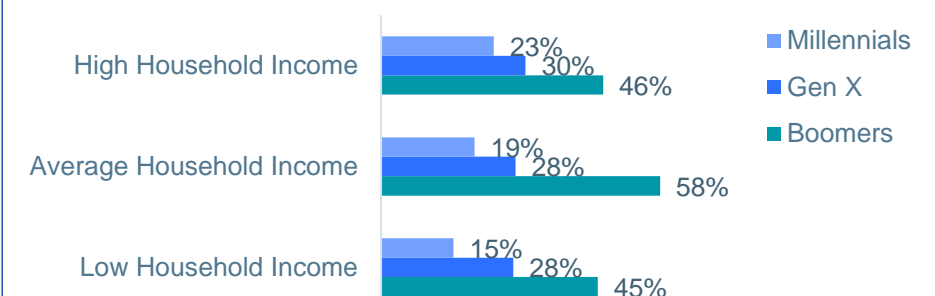
Gender



Ethnicity by Age



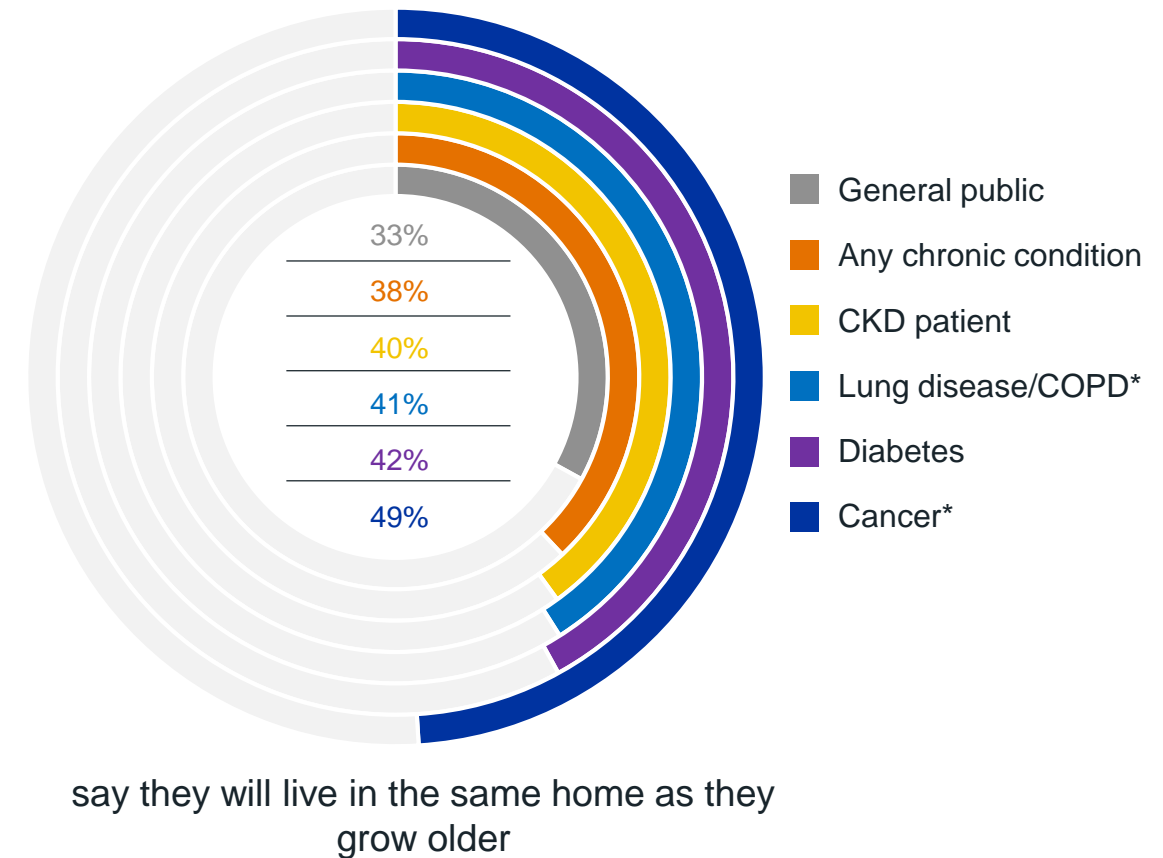
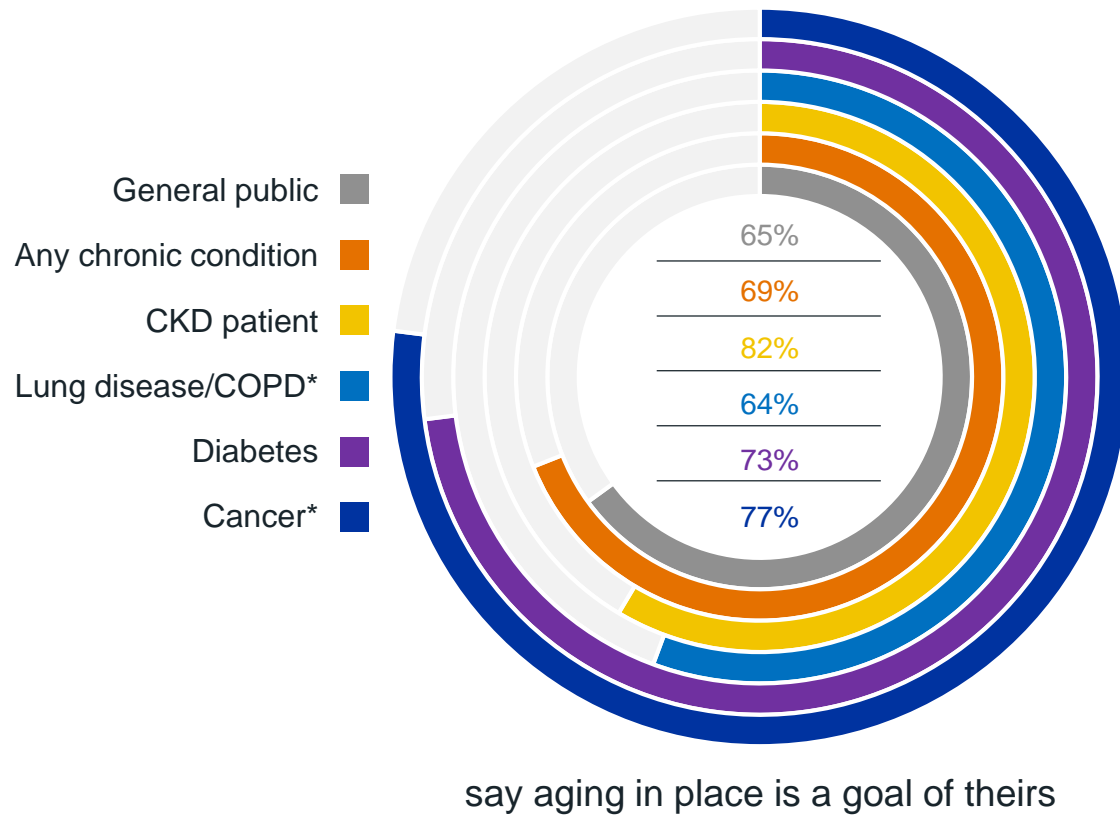
Household Income by Age



Q14/Q15: Do you think you will stay in the same community or move elsewhere as you grow older / And, where do you plan to live as you grow older? | Base: U.S. General public – 18+ (n=2,000), CKD patients (n=500), Gen Z n=177, Millennials n=560, Gen X n=519, Boomers n=637, Greatest Gen n= 107

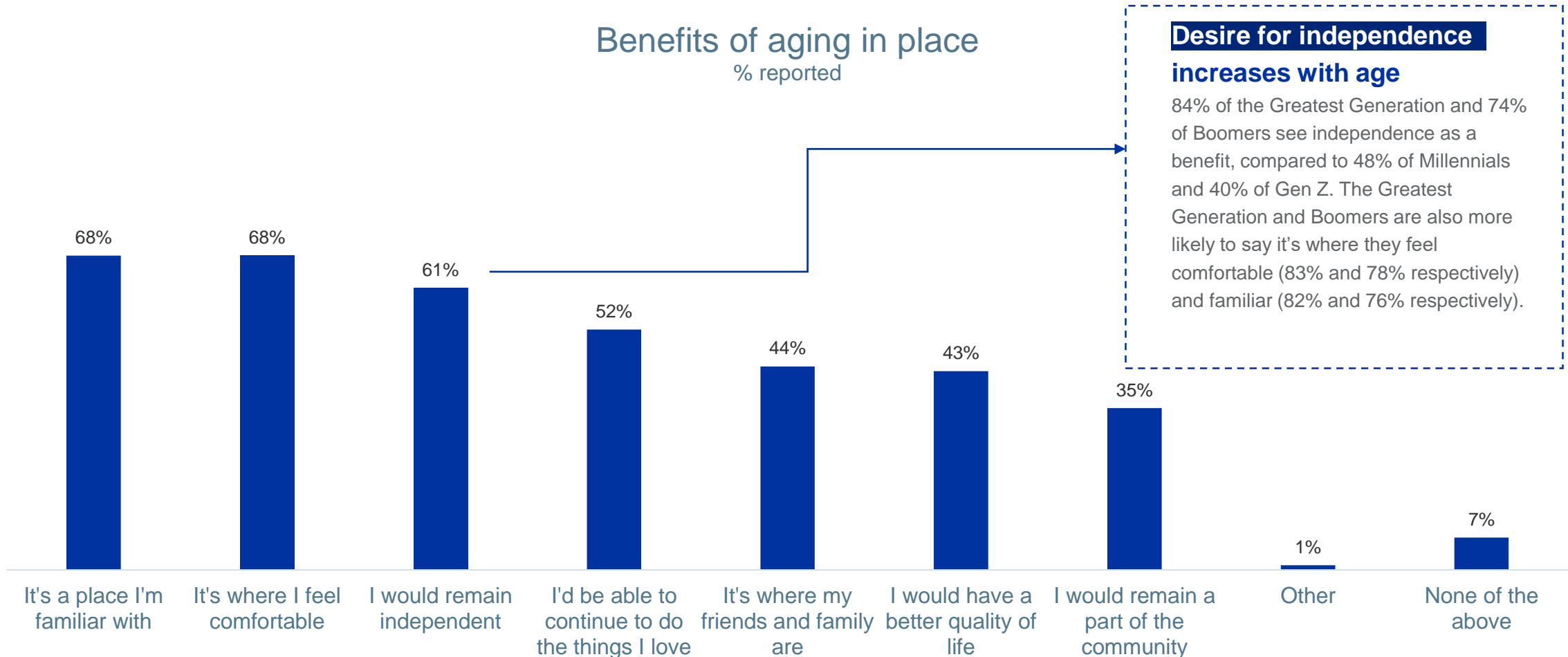
* Warning small sample size ** Warning very small sample size

People with chronic health conditions, such as CKD patients, are more inclined to say they will age in place.



Q15. And, where do you plan to live as you grow older? | Base: U.S. General public– 18+ (n=2,000), CKD patients (n=500), Any chronic condition (n=918), Lung disease (n=56*), Diabetes (n=199), Cancer (n=75*)

Why is aging in place appealing? The majority say comfort, familiarity, and independence.



Q24. In your opinion, what would be the main benefits of "aging in place" in your home and community? | Base: General public n=2000, Gen Z n=177, Millennials n=560, Gen X n=519, Boomers n=637, Greatest Gen n= 107

The barriers to aging in place are both functional and emotional.

Rank	Barriers to aging in place	% general population mentioning
1	I would not have enough money	29%
2	My home is not suitable for the elderly	24%
3	I would not be able to cope with everyday needs	23%
4	I would need specialized healthcare and support	21%
5	I would need to downsize from my current home	21%
6	I would feel alone	19%
7	I would not be near friends and family	17%
8	My community is not suitable for the elderly	10%
9	Other	3%

FINANCIAL



Money is the top barrier Americans face to aging in place.

- 29% say it will prevent them from aging in place
- 45% of patients are concerned about having enough money to age in place

HOUSING SECURITY



Changing to a more **suitable home or downsizing** is a key reason to move.

- 24% of Americans say their home is not suitable for the elderly
- 21% say they would need to downsize

COMMUNITY



Loneliness is another key barrier to aging in place.

- 19% of Americans say they would not be able to age in place because they “would feel alone”
- A quarter (27%) of the public are concerned about feeling alone as they age in place

Millennials are more affected by loneliness.



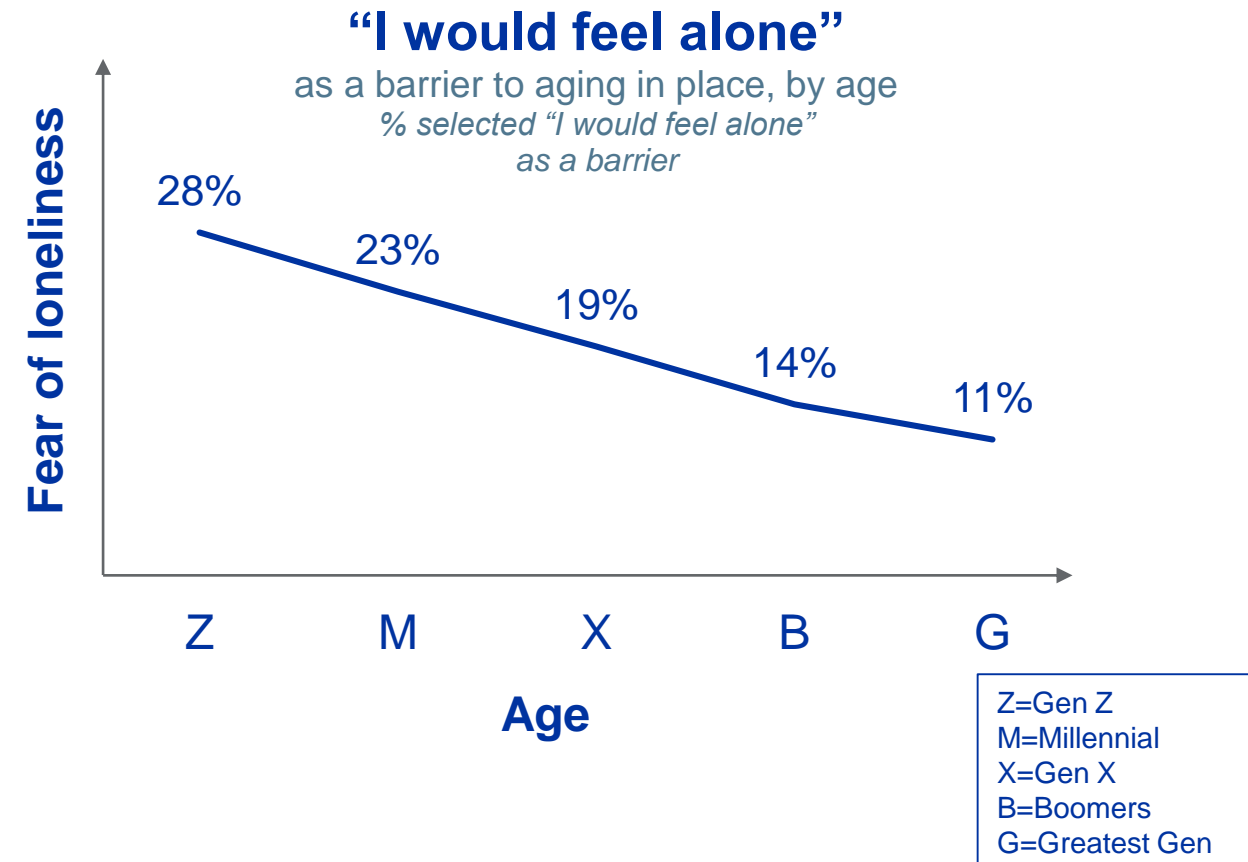
COMMUNITY

Fear of loneliness is significantly more likely to prevent younger generations from thinking they will age in place.

- 28% of Gen Z and 23% of Millennials say they would not be able to age in place because they would feel alone (versus 14% of Boomers and 11% of the Greatest Gen)

► **Younger generations are also more likely to be negatively affected by social factors relating to their community.**

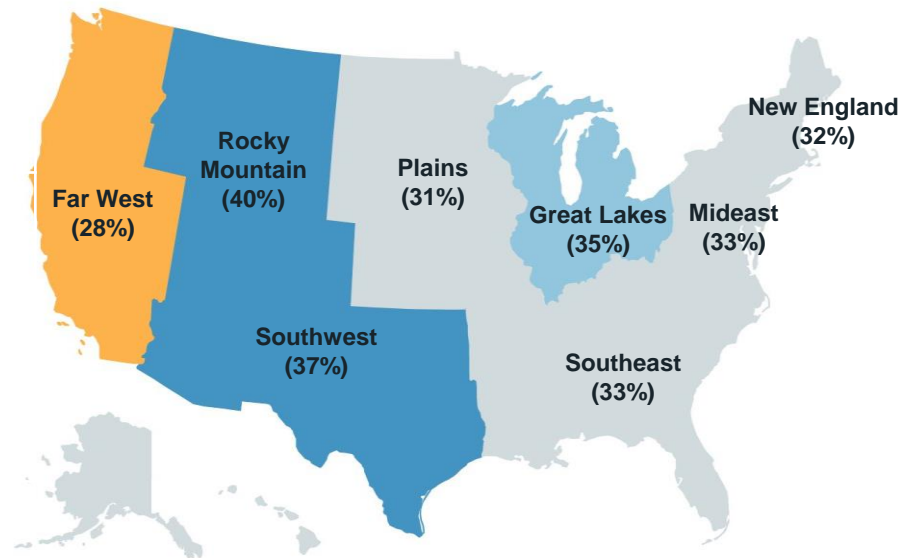
- 37% of Gen Z and 43% of Millennials don't feel part of the community (versus 30% of Boomers and 18% of the Greatest Generation)
- 28% of Gen Z and 24% of Millennials don't feel safe in their community (versus 15% of Boomers and 17% of the Greatest Generation)
- 20% of Gen Z and 19% of Millennials don't have public spaces nearby (versus 11% of Boomers and 9% of the Greatest Generation)



Where you live impacts your chances of aging in place.

► Regions most likely to age in place

Rocky Mountain	40%
Southwest	37%
Great Lakes	35%
Mideast	33%
Southeast	33%
New England	32%
Plains	31%
Far West	28%



► Urban versus rural

Rural populations are more likely to say aging in place is a goal

- 70% of rural populations
- 63% of urban populations

Urban populations are more likely to say that aging in place is not a goal

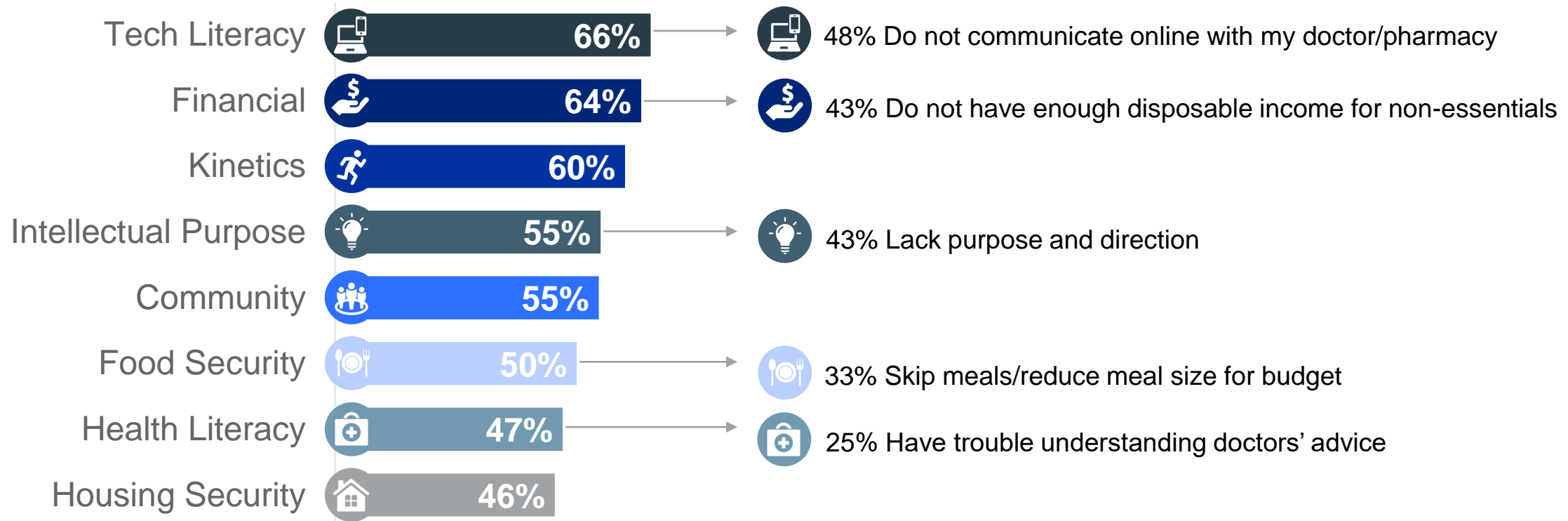
- 37% of urban populations
- 30% of rural populations

Urban populations are less likely to think they will age in place

- 38% of rural populations
- 31% of urban populations

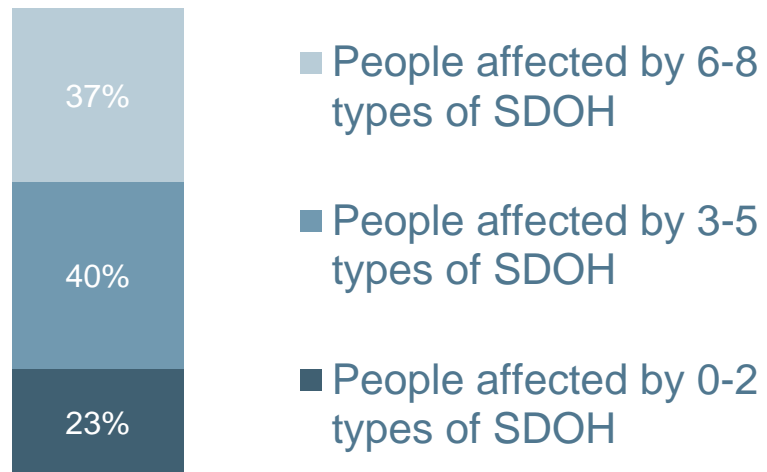
Tech literacy, kinetics, and financial issues are the most common SDOH challenges.

Types of SDOH currently negatively experienced
– general public
% affected by at least one



Most Americans are currently dealing with at least three types of SDOH.

Number of types of SDOH currently
experienced
% of U.S. general public



3 in 4
3+ types of
SDOH

The majority of the U.S. general population are **affected by multiple types of SDOH** (77%, 3 or more types).









1 in 3
6+ types of
SDOH

Over a third are affected by **several types of SDOH** (37%).

High-income individuals are much less affected by SDOH challenges and low-income individuals are more affected.

Types of SDOH – by key demographics
% affected by types of SDOH

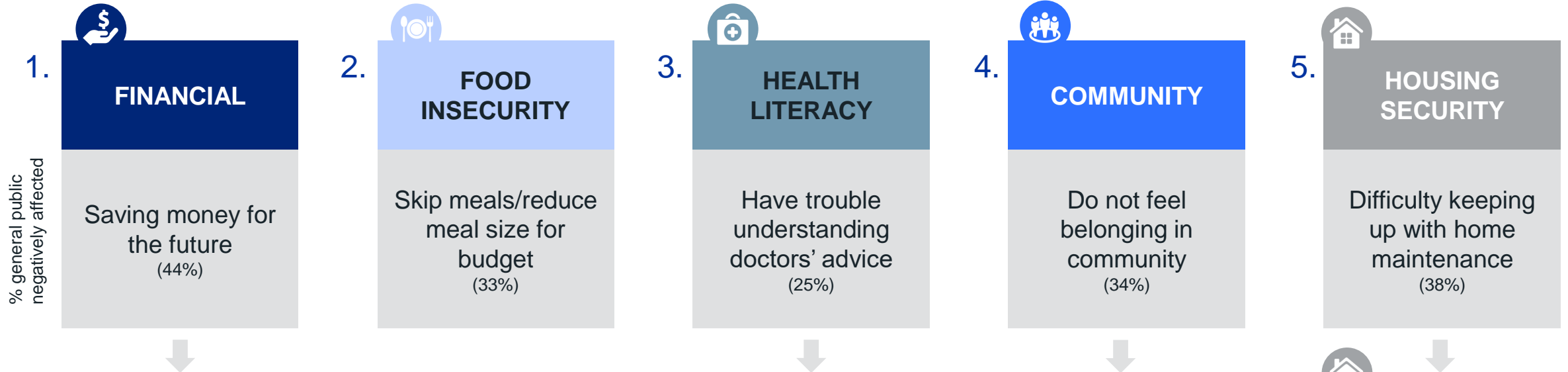
Statistically significant differences, compared to the general population at 90% level: **Sig. more affected** / **Sig. less affected**

		General public	Male	Female	Gen Z	Millennial	Gen X	Boomers	Greatest	Low HHI	Average HHI	High HHI	White	African American /African	Asian American /Asian	Hispanic American
No. SDOH	0-2 SDOH	23%	26%	21%	12%	17%	22%	31%	32%	8%	22%	39%	26%	13%	31%	19%
	3-5 SDOH	40%	38%	41%	33%	39%	41%	41%	45%	36%	43%	41%	40%	45%	39%	36%
	6-8 SDOH	37%	36%	38%	54%	44%	38%	28%	23%	56%	35%	20%	34%	42%	31%	45%
Types of SDOH	 TECH LITERACY	66%	69%	63%	68%	58%	63%	70%	85%	75%	67%	56%	65%	64%	65%	68%
	 FINANCIAL	64%	60%	67%	68%	70%	71%	55%	45%	85%	67%	41%	61%	77%	42%	69%
	 KINETICS	60%	57%	64%	62%	60%	59%	62%	63%	71%	60%	51%	61%	60%	48%	64%
	 INTELLECTUAL PURPOSE	55%	52%	58%	73%	60%	52%	50%	51%	75%	52%	40%	53%	61%	54%	60%
	 COMMUNITY	55%	53%	57%	65%	64%	55%	47%	39%	68%	53%	43%	52%	63%	61%	57%
	 FOOD INSECURITY	50%	51%	50%	70%	62%	52%	38%	28%	67%	50%	36%	46%	64%	42%	56%
	 HEALTH LITERACY	47%	49%	46%	71%	58%	50%	33%	25%	54%	49%	39%	43%	56%	54%	52%
	 HOUSING SECURITY	46%	45%	47%	50%	53%	49%	37%	39%	56%	45%	38%	43%	48%	45%	54%

Q6-Q13: To what extent do you agree or disagree with each of the following statements? | SDOH | Base: U.S. General public – 18+ (n=2,000).

The barriers to aging in place are highly connected to the SDOH that people experience.

Top SDOH that are barriers to aging in place:

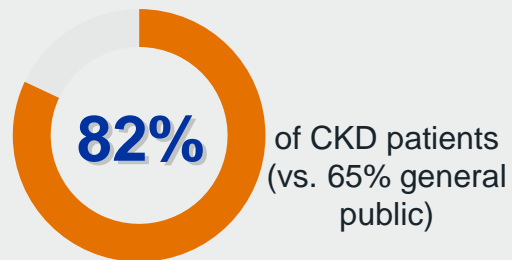


Barriers to aging in place:

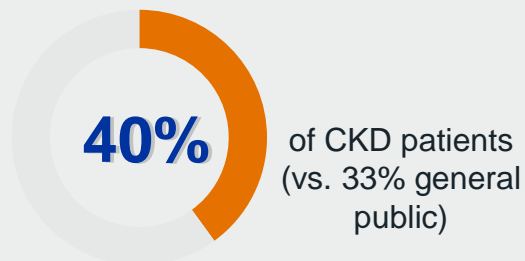


CKD patients are more likely to want to age in place, yet face more SDOH challenges in their daily lives.

CKD patients want to age in place.



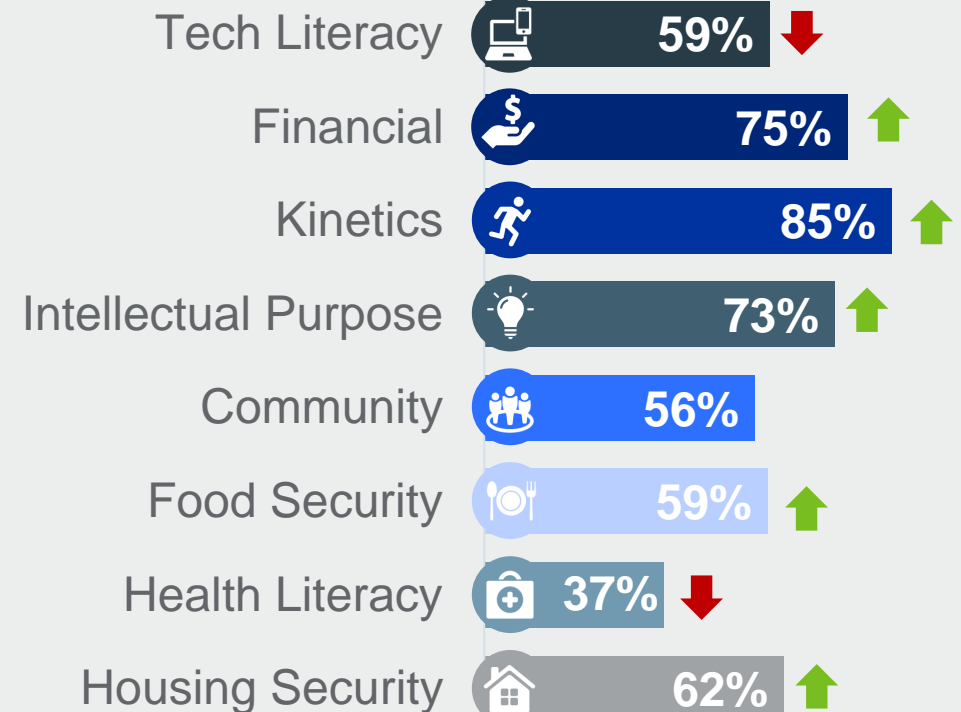
Aging in place is a
personal goal of mine



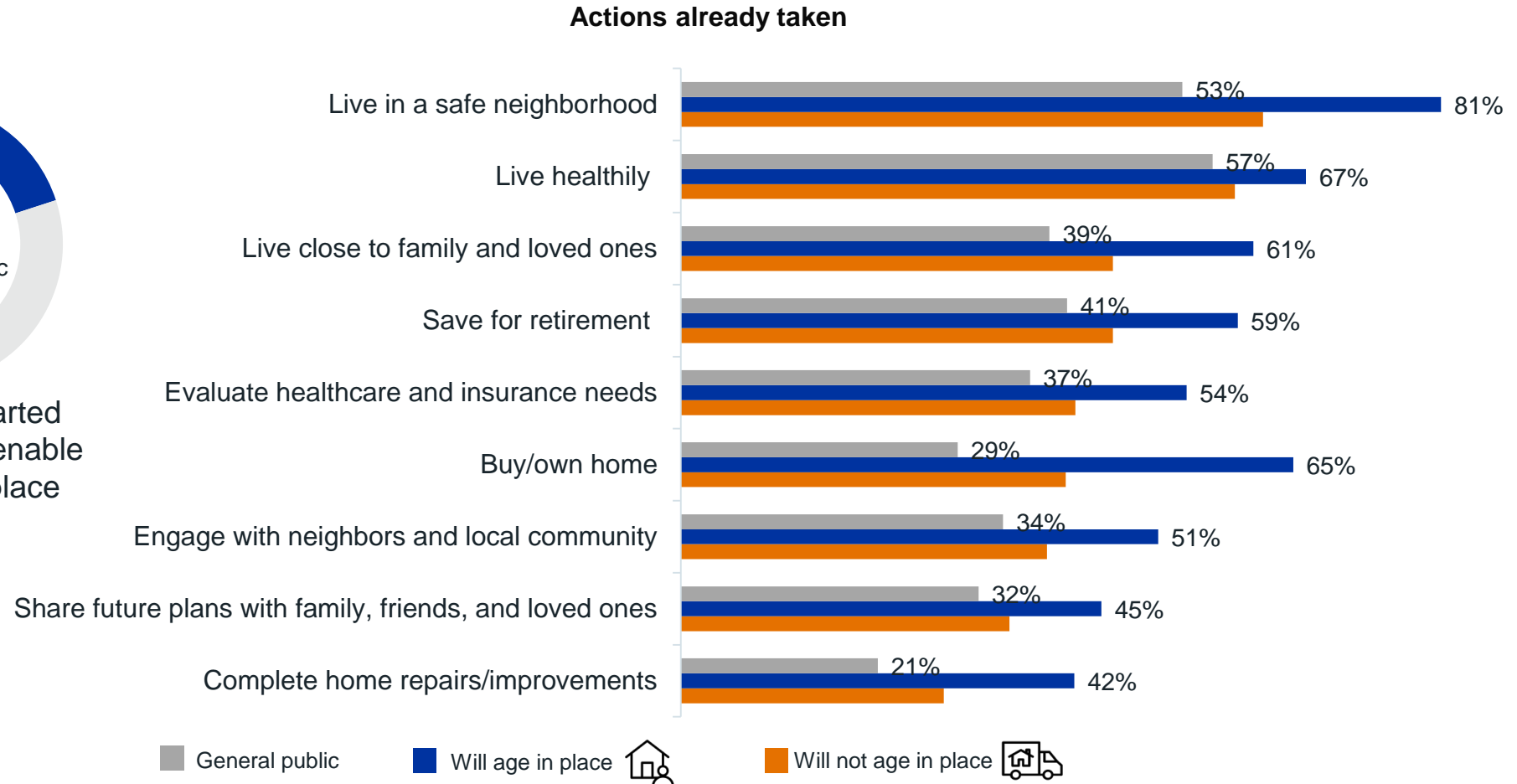
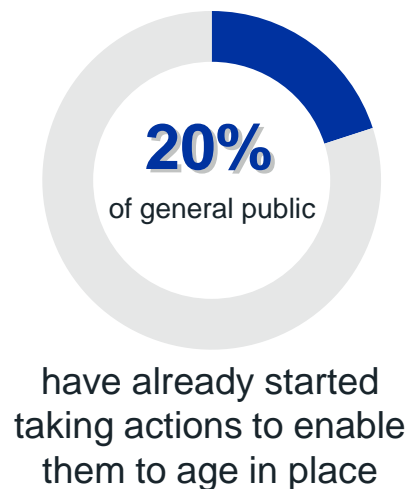
Plan to live in the same
home as they grow old

CKD patients are affected by more SDOH challenges, particularly intellectual purpose (73%) and housing security (62%).

Types of SDOH currently experienced



People who think they will age in place have already started taking actions to enable them to do so.



Q27: Have you started taking actions to enable you to age in place in your home or community? (e.g., taking steps to purchase a home, paying off your mortgage, adding additional accessibility features like ramps or railing.)

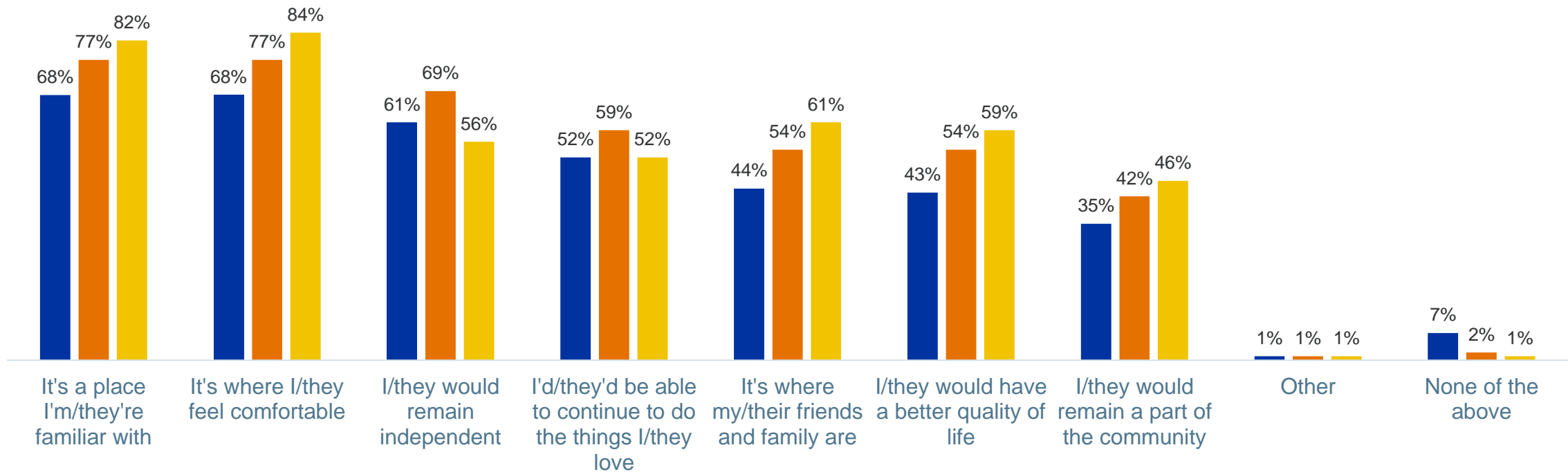
Q31: Which of the following actions have you taken to help you age in place? And which are you planning to take in the next 5 to 10 years?

Benefits and barriers of aging in place

Americans want to age in place for comfort, familiarity, independence, and to be near friends and family.

Benefits of aging in place % Reported

■ General public ■ CKD patients ■ CKD caregivers



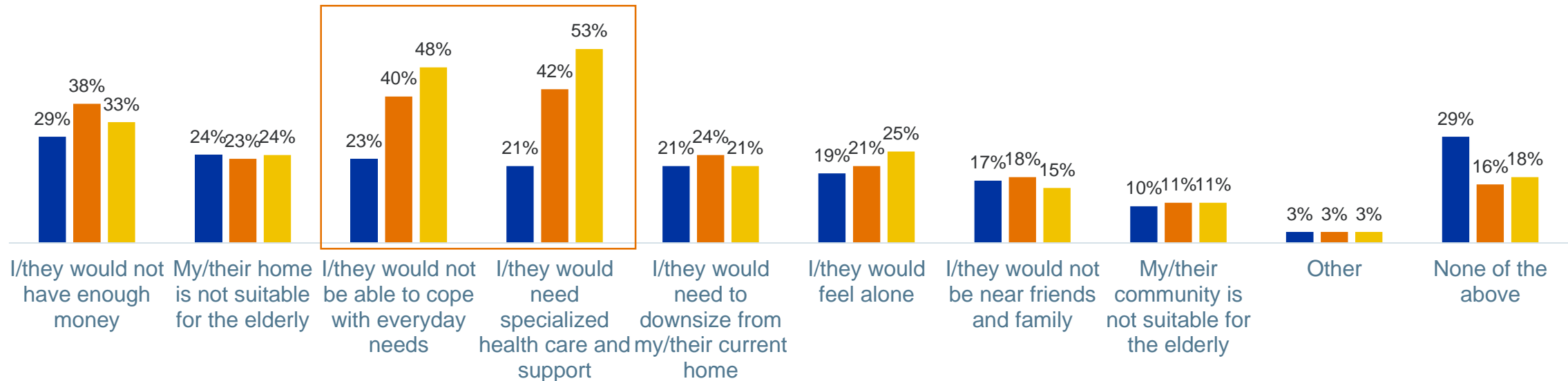
Q24. In your opinion, what would be the main benefits of "aging in place" in your home and community? | Q25. In your opinion, thinking about the person you care for, what would be the main benefits of "aging in place" in their home and community? | Base: General public n=2000, CKD patients n=500, CKD caregivers n=250

Money, adapting the home, coping with everyday needs, and loneliness are key barriers to aging in place.

Barriers to aging in place % reported

■ General public ■ CKD patients ■ CKD caregivers

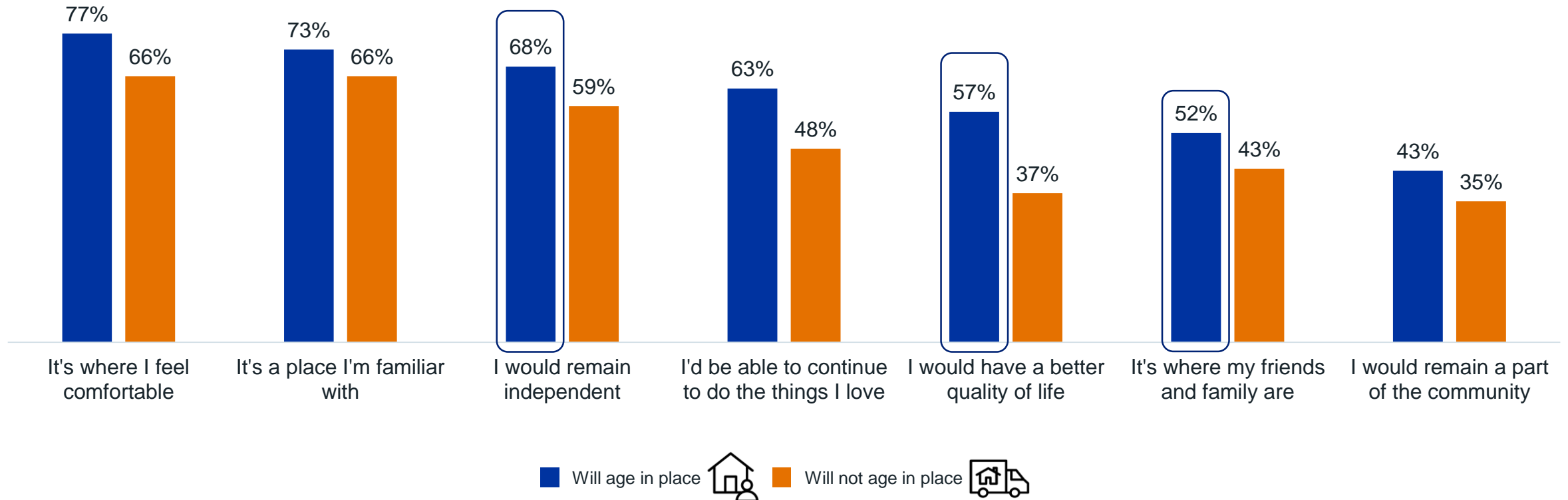
Specialized healthcare and coping with everyday needs are even more of a barrier for CKD patients and caregivers.



Q22: Are any of the following reasons why you would not be able to live in the same home or community when growing older? | Q23: Are any of the following reasons why the person you care for would not be able to live in the same home or community when growing older? | Base: General population (n=2000), CKD patients (n=500), CKD caregivers (n=250)

People who think they will age in place are more likely to focus on the benefits of independence and quality of life.

Benefits of aging in place
% agree



Q24: In your opinion, what would be the main benefits of "aging in place" in your home and community? | General public 'will age in place' (n=661), General public 'will not age in place' (n=1464)

Additional profile: reasons people would not be able to live in the same home or community.

Reasons unable to live in same home or community
% reported

	Total	Male	Female	Gen Z	Mill.	Gen X	Boomers	Greatest	White	African American/ African	Hispanic American	Asian American/ Asian	Low HHI	Avg. HHI	High HHI
I would not have enough money	29%	28%	30%	27%	31%	29%	27%	25%	30%	21%	31%	19%	35%	31%	22%
My home is not suitable for the elderly	24%	22%	26%	24%	26%	25%	23%	11%	24%	20%	24%	39%	21%	19%	31%
I would not be able to cope with everyday needs	23%	21%	25%	24%	20%	19%	28%	31%	26%	16%	22%	16%	27%	24%	21%
I would need specialized healthcare and support	21%	21%	21%	21%	18%	18%	25%	27%	23%	16%	17%	21%	21%	23%	21%
I would need to downsize from my current home	21%	19%	22%	22%	20%	20%	22%	20%	21%	18%	20%	28%	15%	19%	27%
I would feel alone	19%	19%	19%	28%	23%	19%	14%	11%	19%	18%	22%	16%	21%	18%	17%
I would not be near friends and family	17%	17%	18%	24%	18%	18%	14%	16%	16%	20%	16%	20%	16%	19%	18%
My community is not suitable for the elderly	10%	9%	11%	16%	15%	10%	6%	5%	9%	17%	11%	12%	13%	10%	8%
Other	3%	3%	3%	5%	2%	4%	2%	3%	3%	3%	3%	3%	3%	2%	3%
None of the above	29%	30%	28%	24%	26%	29%	32%	35%	28%	32%	29%	25%	28%	29%	28%

Q22: Are any of the following reasons why you would not be able to live in the same home or community when growing older? | Base: U.S. General public – 18+ (n=2,000)

People living with CKD have specific concerns about money and getting the care and support they'd need to age in place.

CONCERNS ABOUT MONEY AND PAYING CAREGIVERS

59% of people living with CKD are concerned about having enough money.

People living with CKD are more concerned about money (59%) than CKD caregivers (47%) and the general public (45%).

41% of people living with CKD are concerned about paying caregivers, as are 38% of caregivers.

CONCERNS ABOUT GETTING THE CARE THEY NEED

49% of people living with CKD and 62% of caregivers are concerned about specialized healthcare.

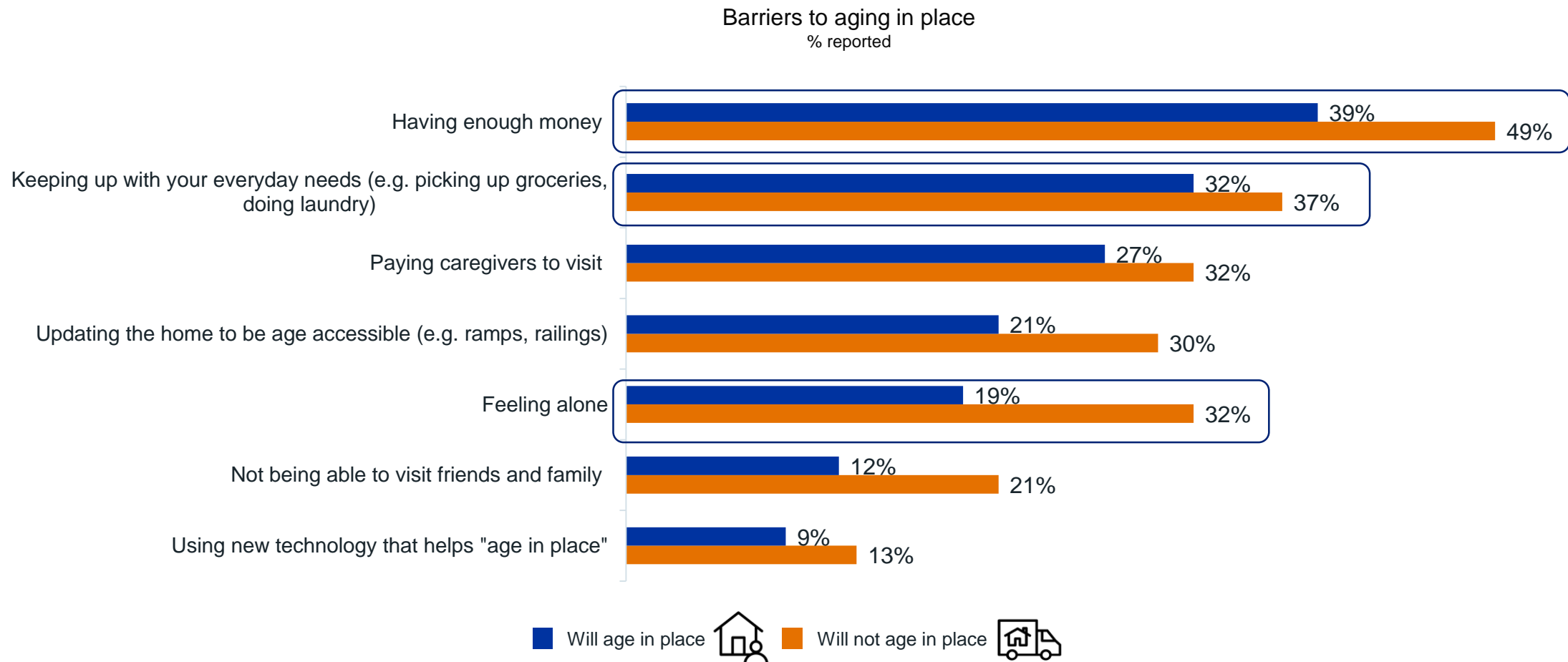
A third of the general public (33%) is concerned about relying on family and friends for care – rising to 40% of people living with CKD and 51% caregivers.

CONCERNS ABOUT LONELINESS

A quarter (27%) of the general public is concerned about feeling alone.

A quarter (25%) of people living with CKD share the same concern about feeling alone.

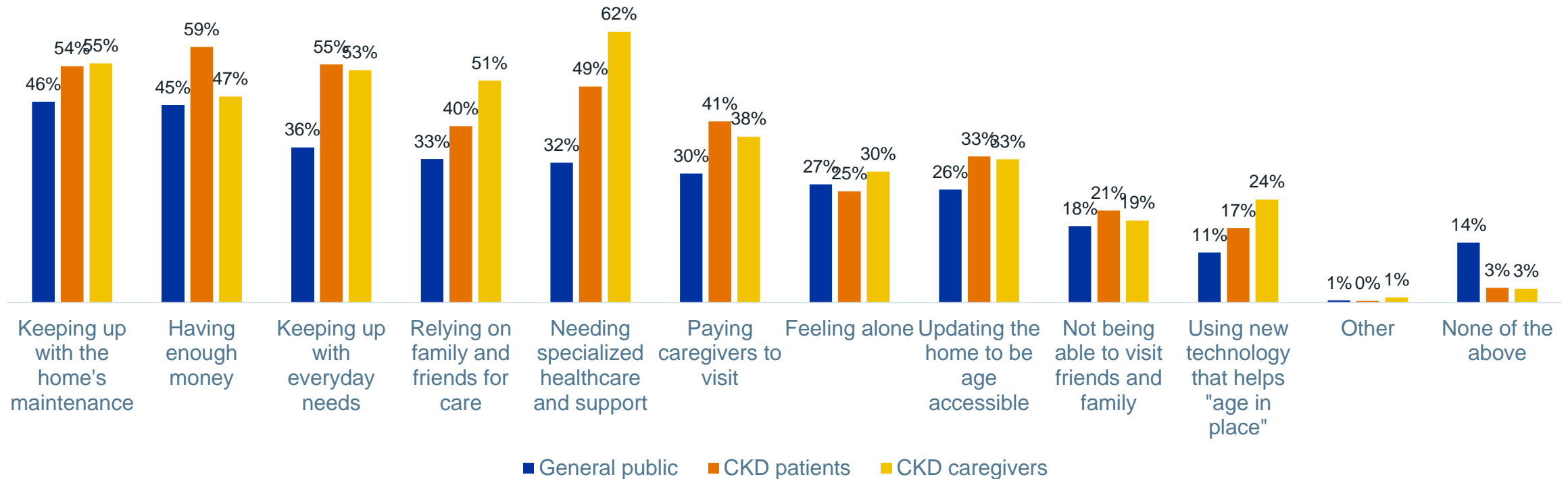
Many have concerns about money, loneliness, and coping with everyday needs in their homes.



Q26: What concerns you most about the idea of "aging in place"? | Base: General public 'will age in place' (n=661), General public 'will not age in place' (n=1464)

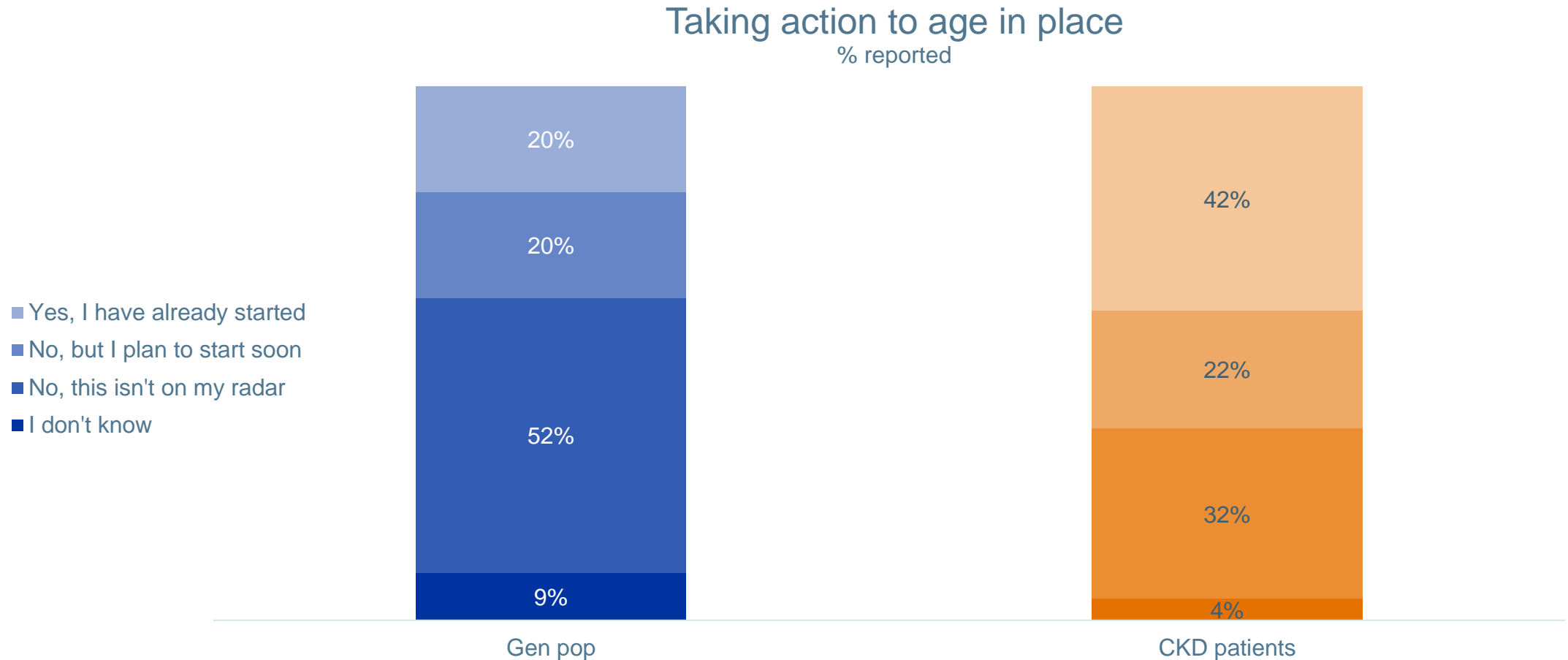
CKD caregivers' experiences inform their knowledge of the specialized care for those in need.

Concerns about aging in place
% reported



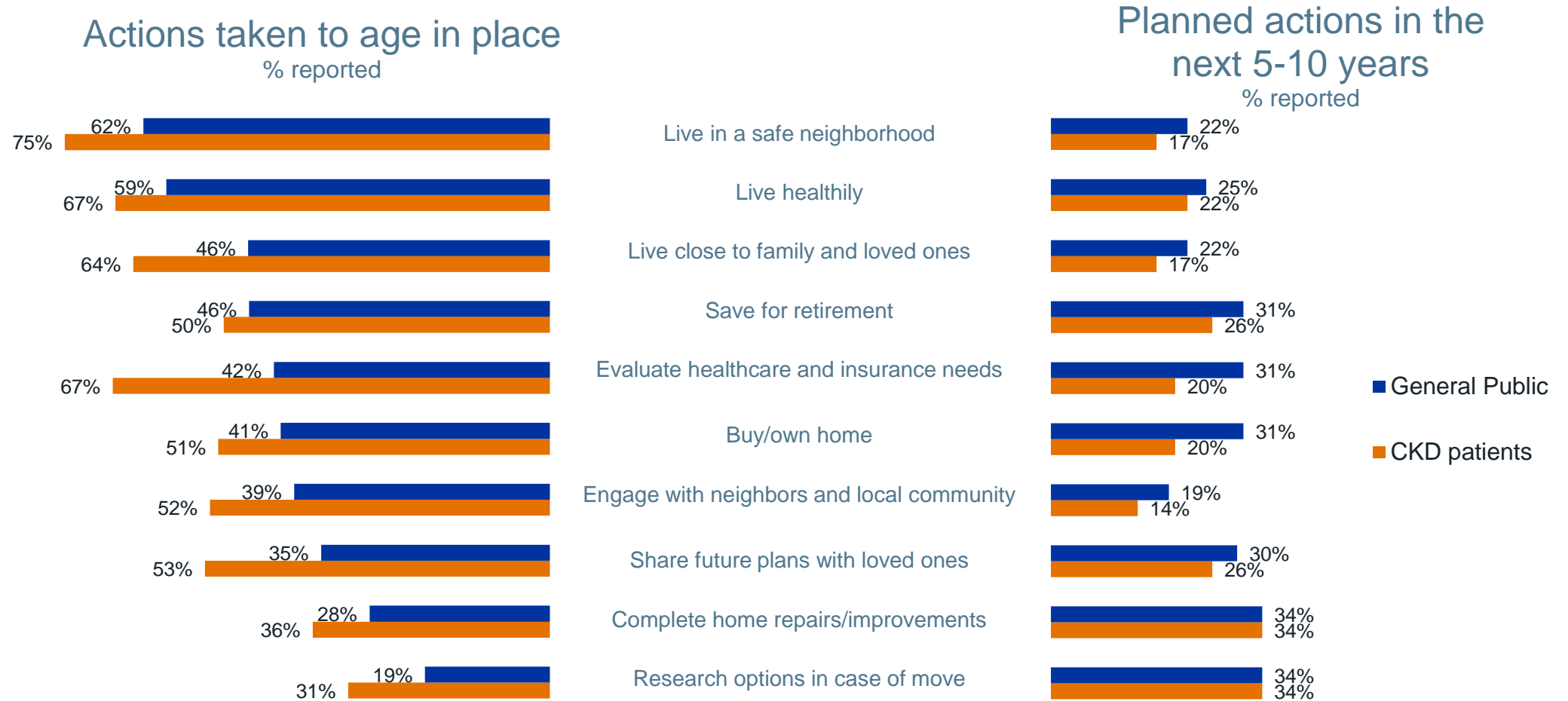
Q26: What concerns you the most about the idea of "aging in place"? | Base: General public (n=2000), CKD patients (n=500), CKD caregivers (n=250)

Over half of the general population have not yet considered taking actions to enable them to age in place (52%).



Q27: Have you started taking actions to enable you to age in place in your home or community? (e.g., taking steps to purchase a home, paying off your mortgage, adding additional accessibility features like ramps or railing). | Base: General public (n=2000), CKD patients (n=500)

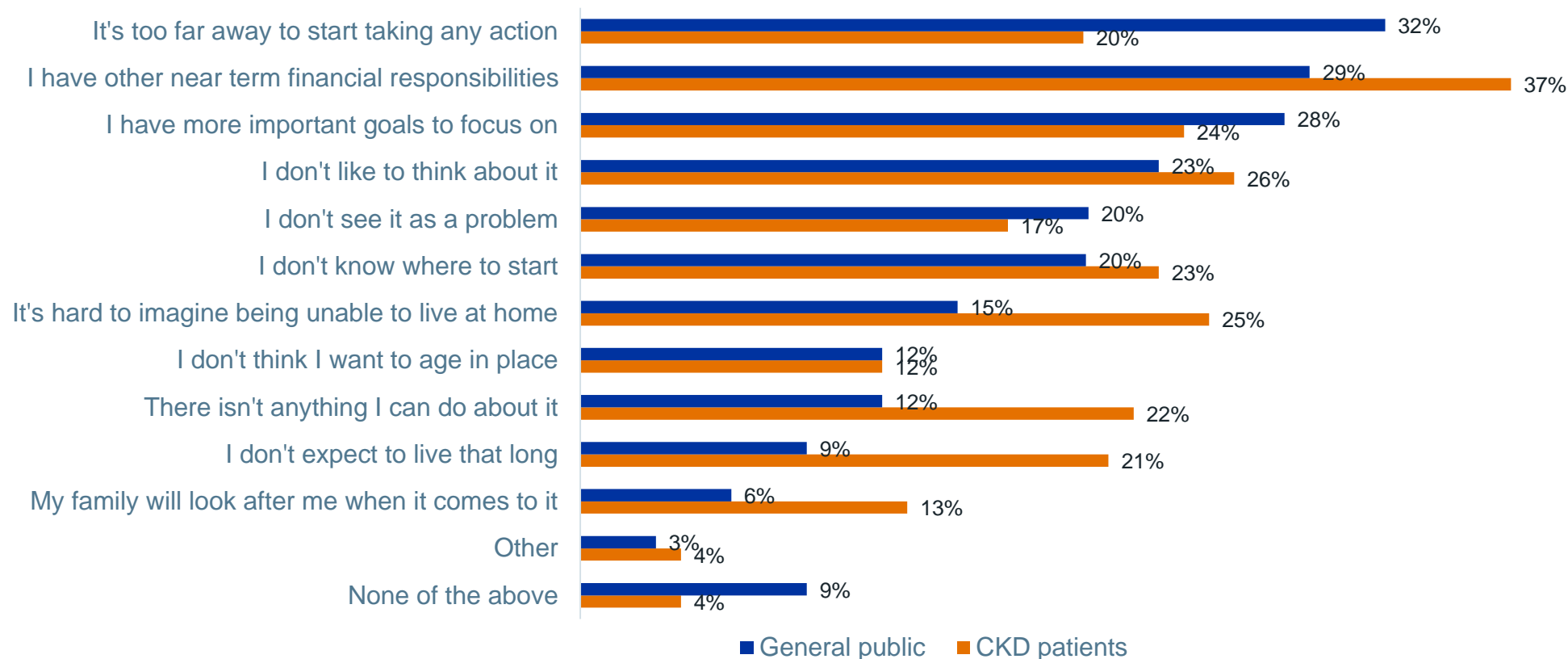
CKD patients have already begun to take actions to age in place in higher percentages than the general public.



Q31: Which of the following actions have you taken to help you age in place? And which are you planning to take in the next 5 to 10 years? | Base: General public (n=2000), CKD patients (n=500)

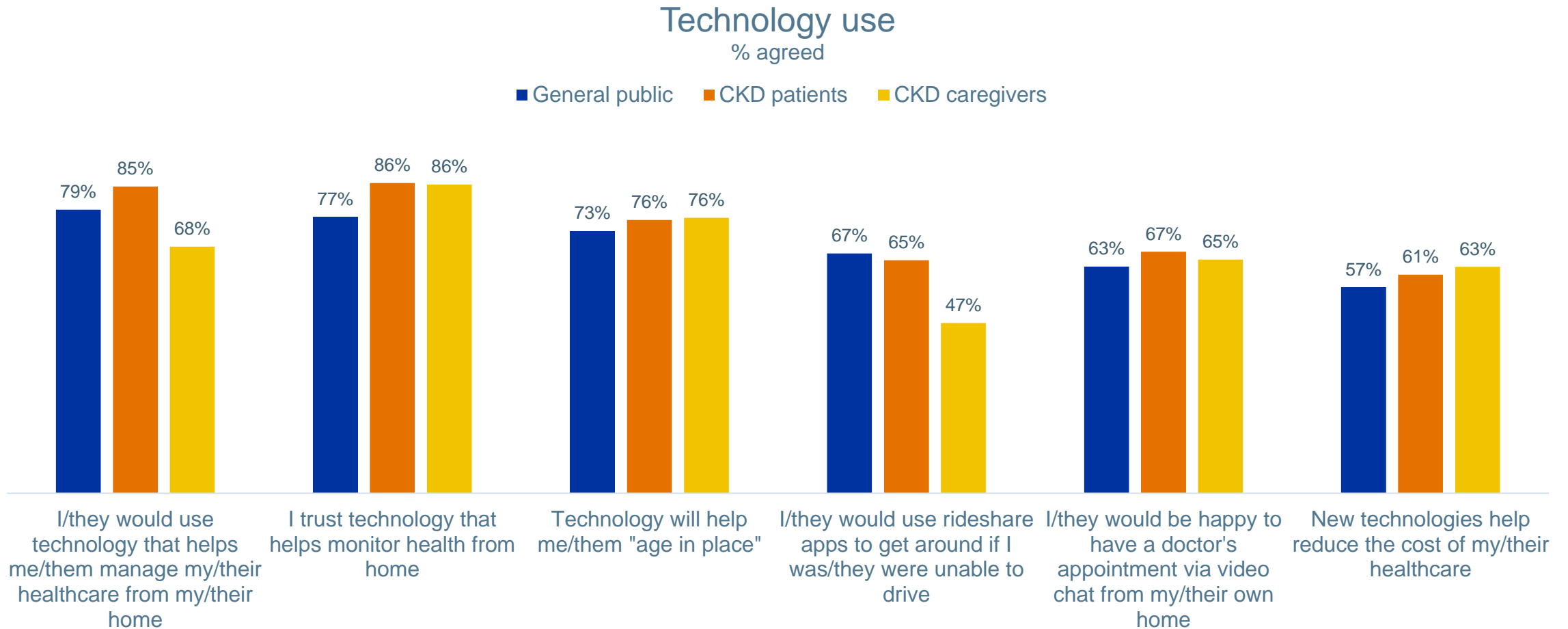
CKD patients' medical expenses may make it difficult for them to take aging in place actions.

Reasons aging in place actions not taken
% reported



Q30. Why have you not started taking actions to age in place? | Base: General public n=1607, CKD patients n=291

All audiences are interested in using technology to improve health and associated aspects of life.



Q26a: To what extent do you agree or disagree with each of the following statements about technology? | Base: General public (n=2000), CKD patients (n=500), CKD caregivers (n=250)

SDOH

The Aging in Place in America Survey

A guide to the SDOH investigated in the Aging in Place in America Survey.

SDOH can be broken down into eight categories, measured by four specific statements self-rated on a 4-point agreement scale.

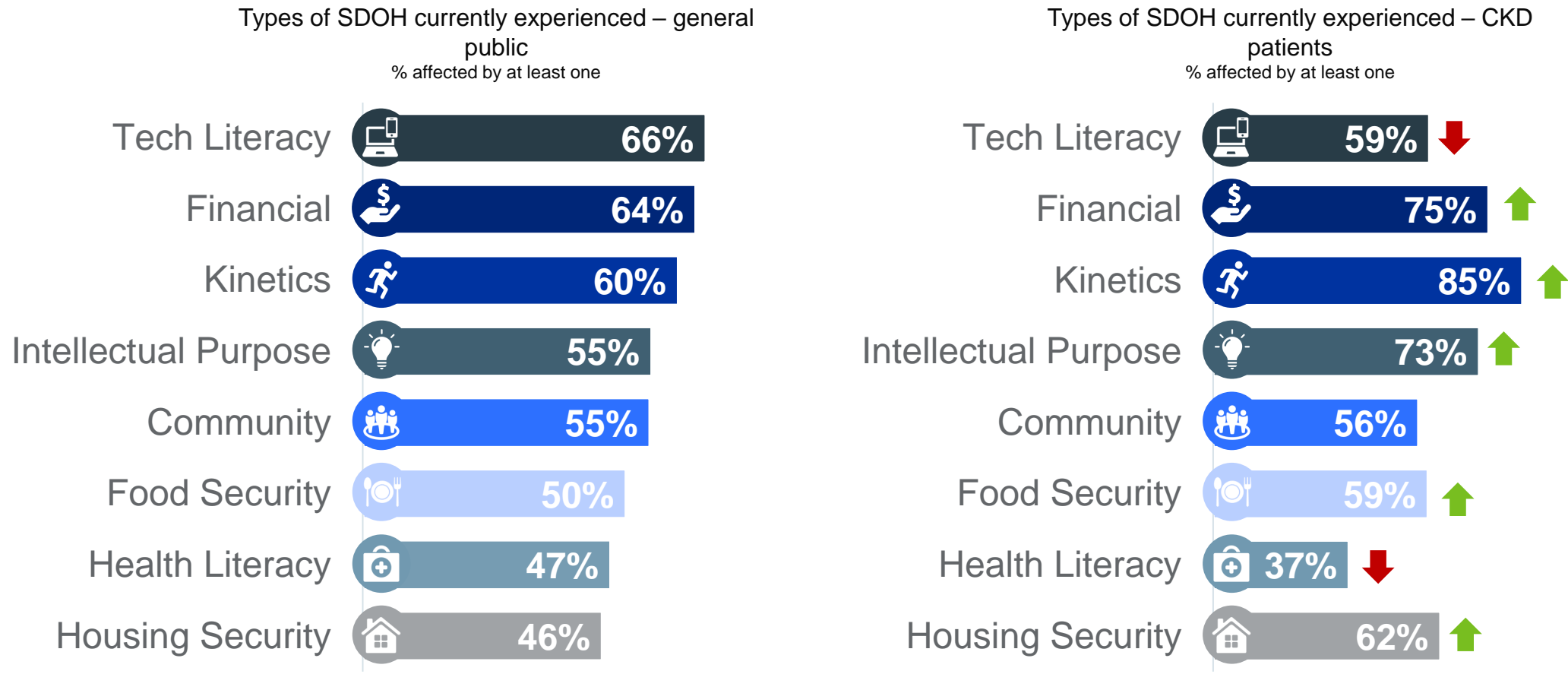


SDOH methodology

For the purposes of this research, a series of specific attitudinal statements were developed under eight SDOH categories:

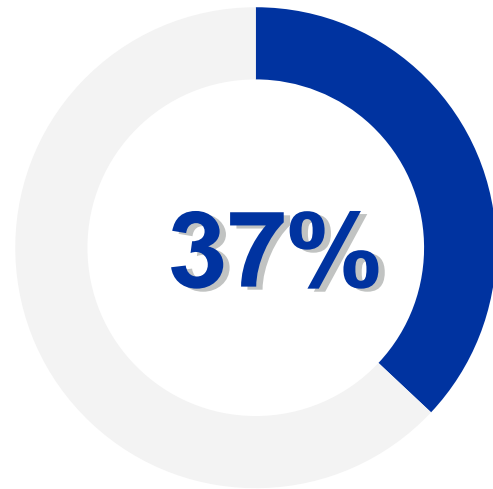
- There were a total of 32 specific attitudinal statements, each self-rated on a 4-point agreement scale.
- Four statements within each of the eight SDOH categories were developed based on existing research around the challenges of SDOH.
- Each of the four statements for each category added dimension to the way this SDOH can affect people in their everyday lives.
- Each group has three positively worded statements and one negatively worded statement.

Tech literacy, kinetics, and financial issues are the most common SDOH issues.

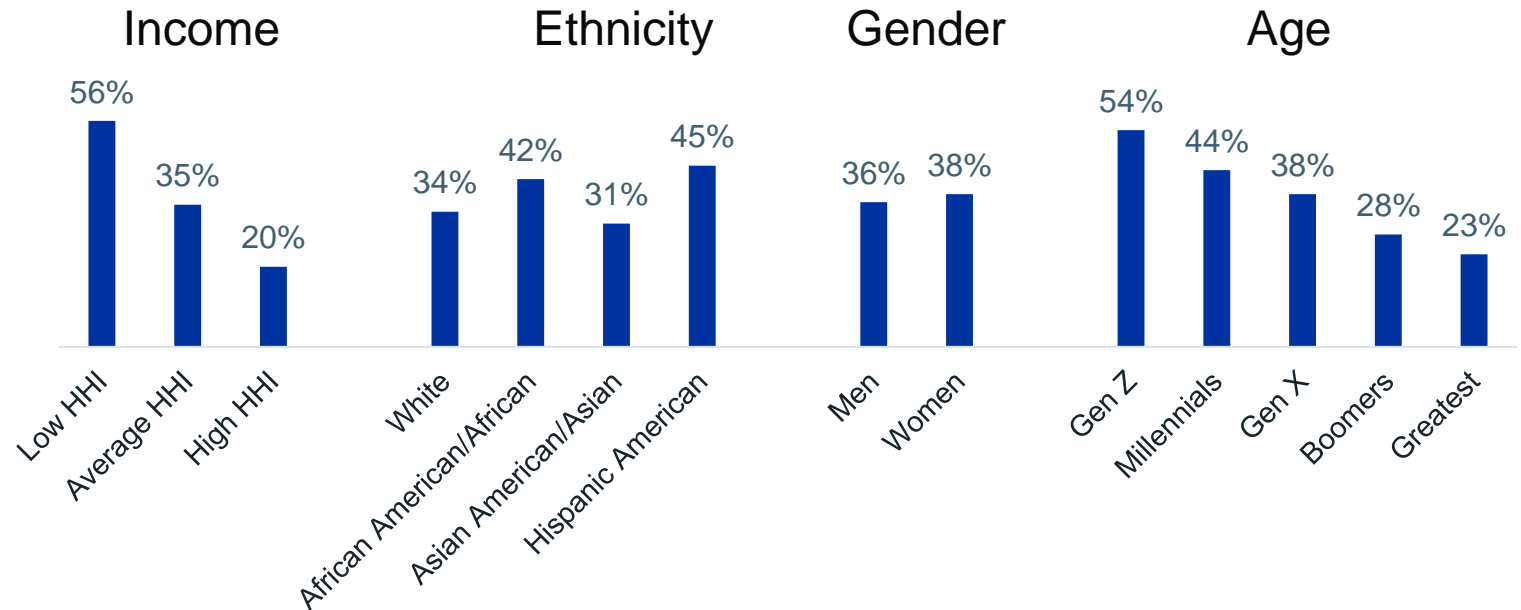


Lower income individuals, African Americans, and Hispanic Americans are most affected by SDOH.

Specific SDOH statements
% agree



say experiencing 6+
types of **SDOH**











High-income individuals are much less affected by SDOH challenges and low-income individuals are more affected.

Types of SDOH – by key demographics
% affected by types of SDOH

Statistically significant differences, compared to the general population at 90% level:

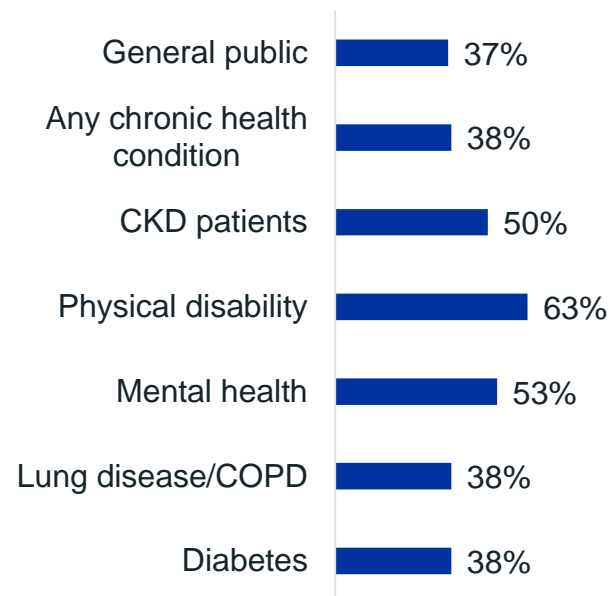
Sig. more affected / Sig. less affected

		General public	Male	Female	Gen Z	Millennial	Gen X	Boomers	Greatest	Low HHI	Average HHI	High HHI	White	African American /African	Asian American /Asian	Hispanic American
No. SDOH	0-2 SDOH	23%	26%	21%	12%	17%	22%	31%	32%	8%	22%	39%	26%	13%	31%	19%
	3-5 SDOH	40%	38%	41%	33%	39%	41%	41%	45%	36%	43%	41%	40%	45%	39%	36%
	6-8 SDOH	37%	36%	38%	54%	44%	38%	28%	23%	56%	35%	20%	34%	42%	31%	45%
Types of SDOH	 TECH LITERACY	66%	69%	63%	68%	58%	63%	70%	85%	75%	67%	56%	65%	64%	65%	68%
	 FINANCIAL	64%	60%	67%	68%	70%	71%	55%	45%	85%	67%	41%	61%	77%	42%	69%
	 KINETICS	60%	57%	64%	62%	60%	59%	62%	63%	71%	60%	51%	61%	60%	48%	64%
	 INTELLECTUAL PURPOSE	55%	52%	58%	73%	60%	52%	50%	51%	75%	52%	40%	53%	61%	54%	60%
	 COMMUNITY	55%	53%	57%	65%	64%	55%	47%	39%	68%	53%	43%	52%	63%	61%	57%
	 FOOD INSECURITY	50%	51%	50%	70%	62%	52%	38%	28%	67%	50%	36%	46%	64%	42%	56%
	 HEALTH LITERACY	47%	49%	46%	71%	58%	50%	33%	25%	54%	49%	39%	43%	56%	54%	52%
	 HOUSING SECURITY	46%	45%	47%	50%	53%	49%	37%	39%	56%	45%	38%	43%	48%	45%	54%









Q6-Q13: To what extent do you agree or disagree with each of the following statements? | SDOH | Base: U.S. General public – 18+ (n=2,000).

People who suffer from chronic conditions experience more SDOH, which could impact their plans.

People with chronic health conditions who are **negatively affected by six or more types of SDOH factors**



Types of SDOH – by health condition
% affected by types of SDOH

	General public	Any chronic condition	CKD patient	Physical disability	Mental health	Lung disease/ COPD
 TECH LITERACY	66%	65%	59%	77%	61%	63%
 FINANCIAL	64%	63%	75%	82%	80%	63%
 KINETICS	60%	69%	85%	92%	72%	79%
 INTELLECTUAL PURPOSE	55%	59%	73%	85%	76%	71%
 COMMUNITY	55%	55%	56%	71%	68%	54%
 FOOD INSECURITY	50%	48%	59%	65%	69%	54%
 HEALTH LITERACY	47%	39%	37%	48%	53%	34%
 HOUSING SECURITY	46%	48%	62%	67%	59%	52%

Statistically significant differences, compared to the general population at 90% level:









Sig. more affected / Sig. less affected

People with chronic conditions such as CKD, physical disabilities, or mental health conditions, have multiple SDOH.

Types of SDOH – by health condition
% affected by types of SDOH

Statistically significant differences, compared to the general population at 90% level:

Sig. more affected / Sig. less affected

		General public	Any chronic conditions	CKD patient	Physical disability	Mental health	Heart disease	Diabetes	Lung disease/ COPD	Cancer
No. of SDOH	0-2 SDOH	23%	23%	16%	4%	9%	8%	22%	14%	32%
	3-5 SDOH	40%	40%	34%	33%	38%	51%	41%	48%	37%
	6-8 SDOH	37%	37%	50%	63%	53%	41%	38%	38%	31%
Types of SDOH	 TECH LITERACY	66%	65%	59%	77%	61%	70%	65%	63%	64%
	 FINANCIAL	64%	63%	75%	82%	80%	74%	68%	63%	56%
	 KINETICS	60%	69%	85%	92%	72%	78%	78%	79%	67%
	 INTELLECTUAL PURPOSE	55%	59%	73%	85%	76%	74%	64%	71%	55%
	 COMMUNITY	55%	55%	56%	71%	68%	64%	50%	54%	52%
	 FOOD INSECURITY	50%	48%	59%	65%	69%	51%	47%	54%	36%
	 HEALTH LITERACY	47%	39%	37%	48%	53%	27%	30%	34%	33%
	 HOUSING SECURITY	46%	48%	62%	67%	59%	55%	46%	52%	47%

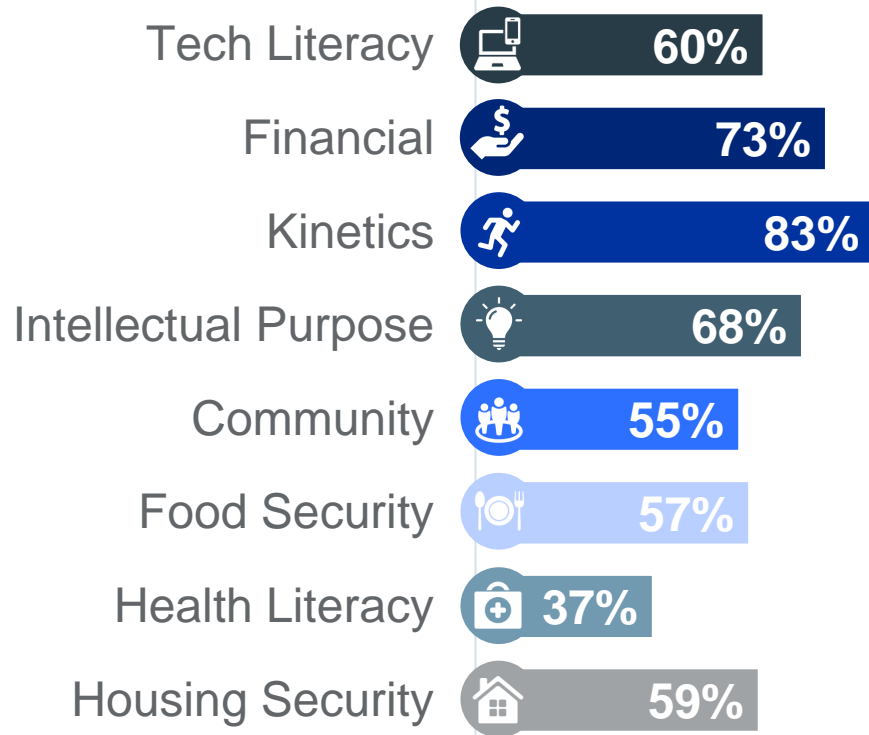
Q6-Q13: To what extent do you agree or disagree with each of the following statements?

Base: U.S. General public – 18+ (n=2,000), CKD patients (n=500)

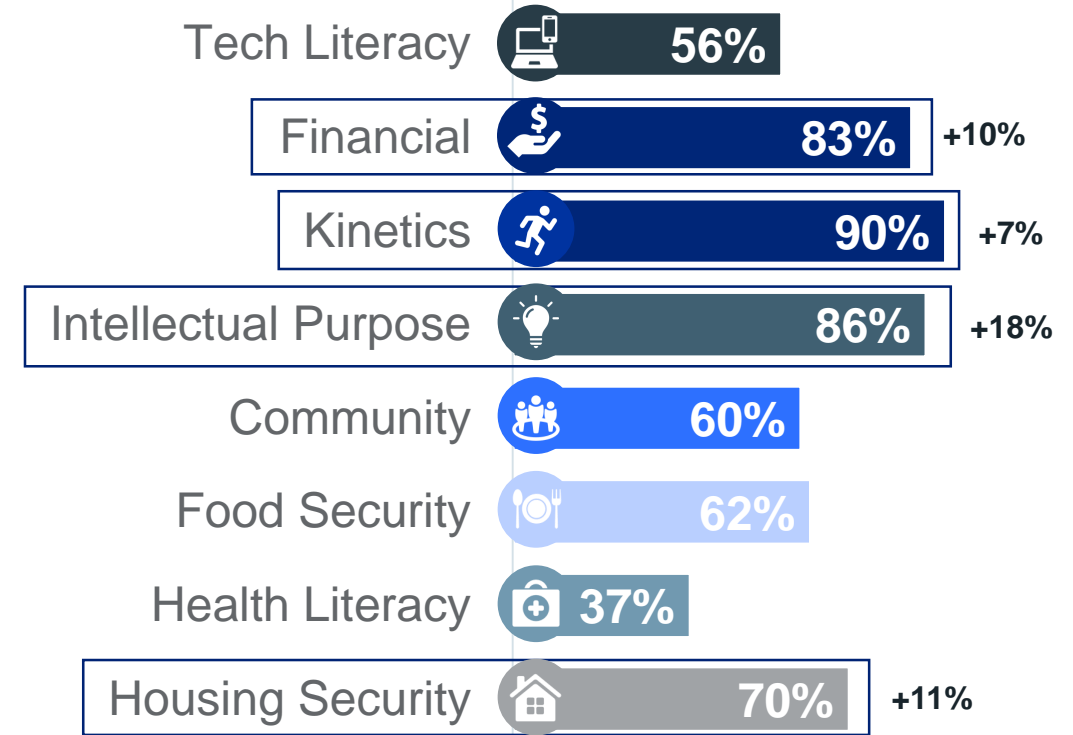
People living with kidney failure are more likely to be affected by these SDOH.

CKD
focus

Stage 1-3B



Stage 4+ (Kidney Failure)

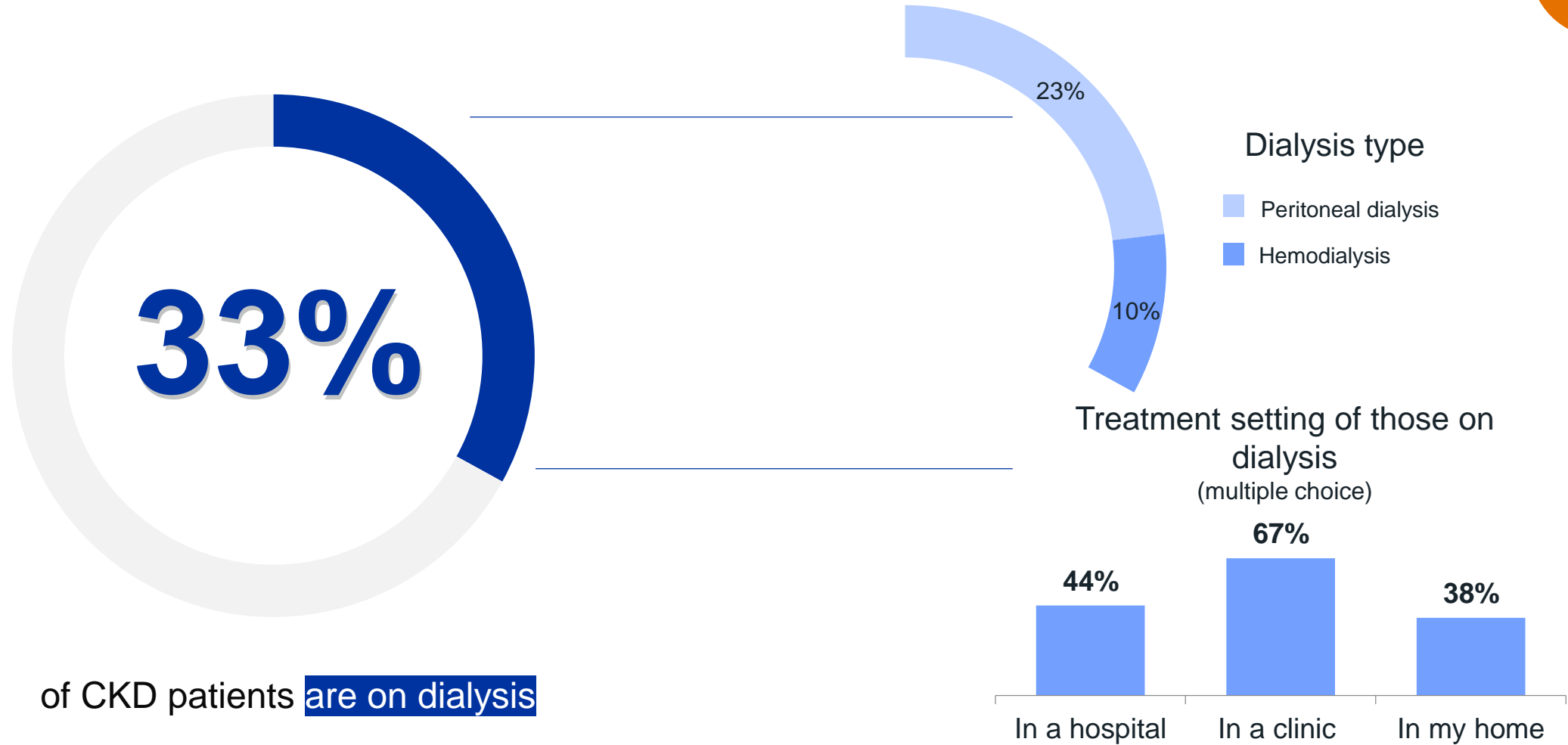


People living with kidney failure are more affected by **intellectual purpose (86%)**, **kinetics (90%)**, **housing security (70%)**, and **financial (83%)** factors. People living with kidney failure and other people living with CKD are equally affected by health literacy and similarly affected by tech literacy.

Focus on people living with CKD

CKD patient breakdown

CKD
focus



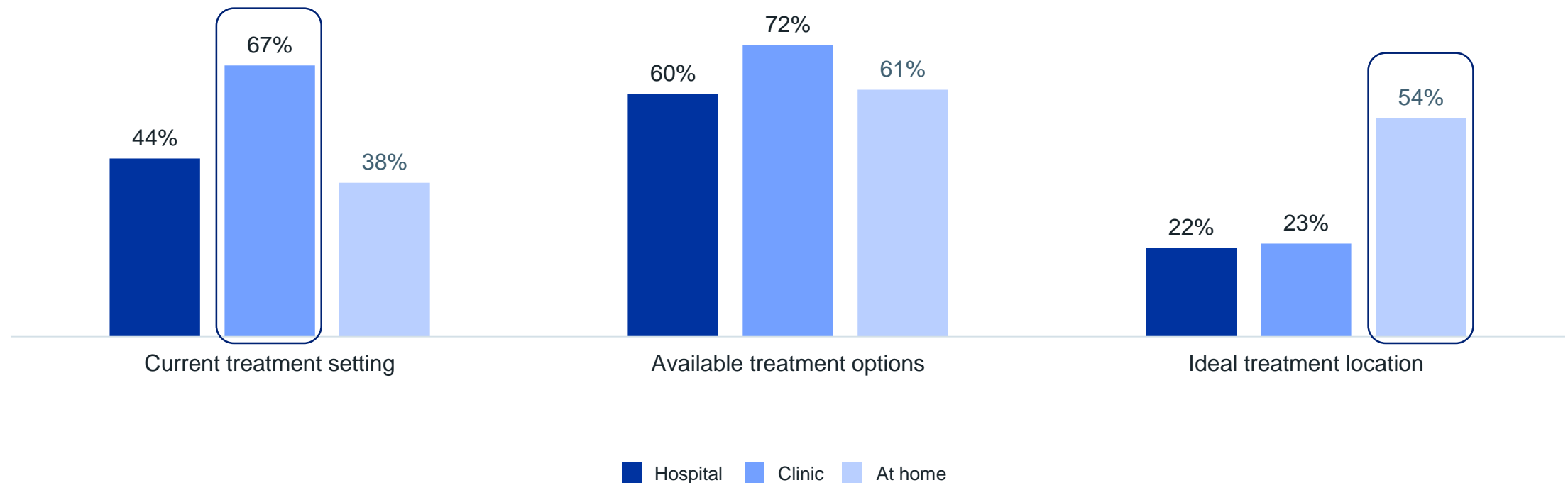
S11. Are you currently on dialysis to treat kidney disease? | Base: CKD patients (n=500)

S12. Have you ever had a kidney transplant? | Base: CKD patients (n=500)

Q32: In what setting do you receive dialysis? | Base: Patients on dialysis (n=166)

Although current dialysis patients ideally would like to receive treatment at home, the majority receive treatment in a center.

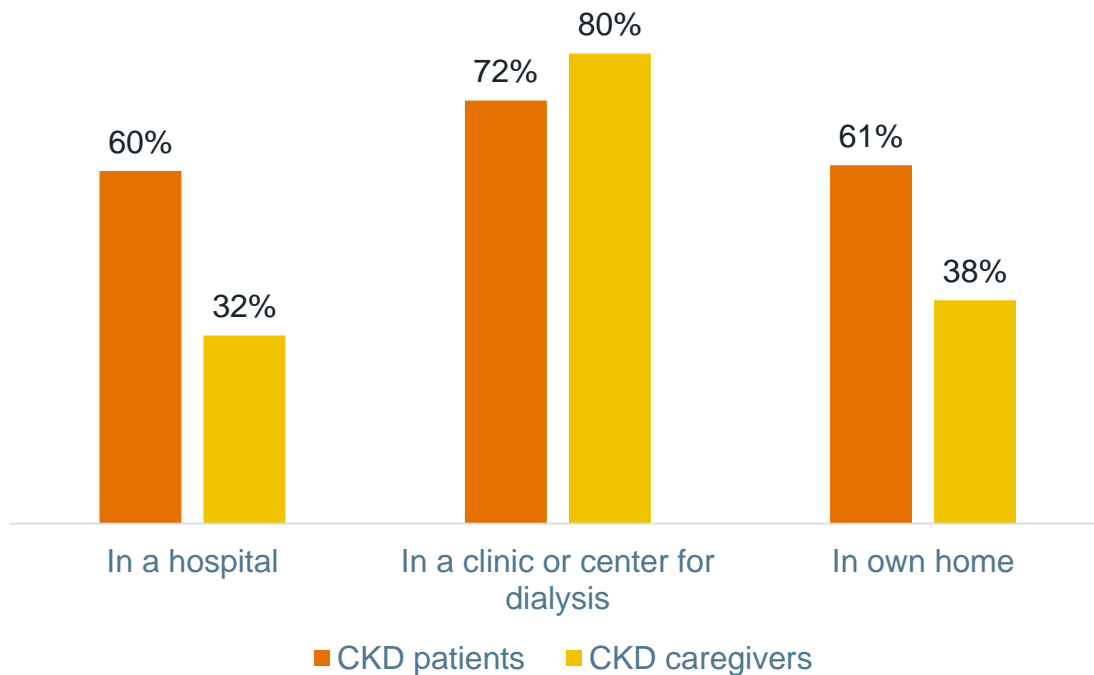
Dialysis perceptions, among dialysis patients
% reported



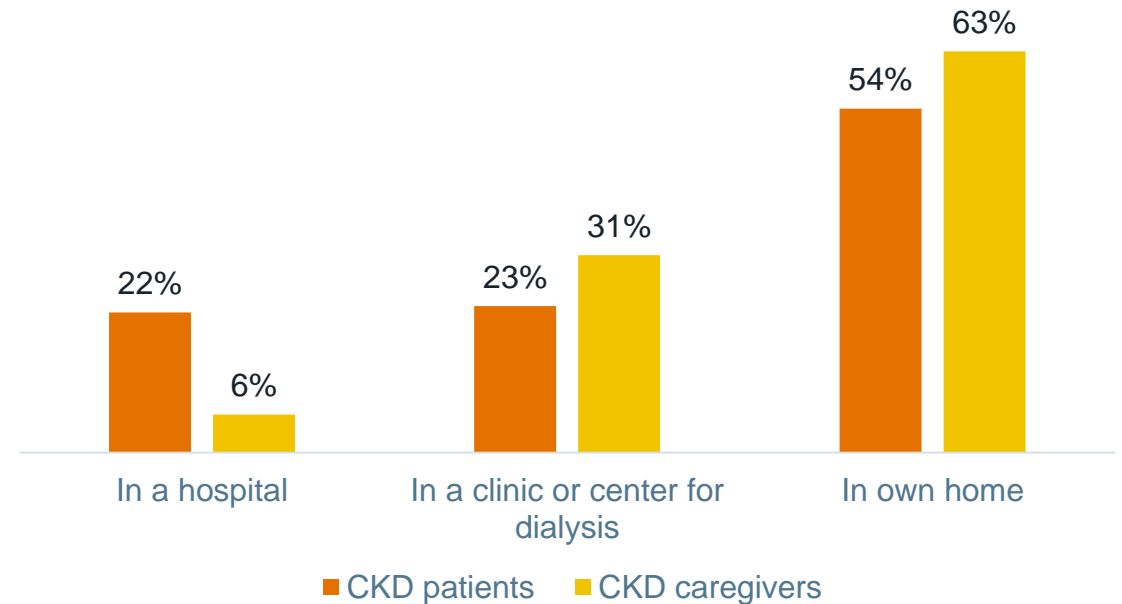
Q32. In what setting do you receive dialysis? Select all that apply. | Q33. Which of the following dialysis options do you have available, based on options, your location and current circumstances? Select all that apply. | Q34. If you could receive the same type of quality of care in each of the three locations below, which of the following dialysis options would you choose in an ideal world? Select one. | Base: Patients on Dialysis (n=166)

While patients would prefer to be treated in their homes, usually treatments are administered in a center for dialysis.

Current availability: Based on location / current circumstance
% reported

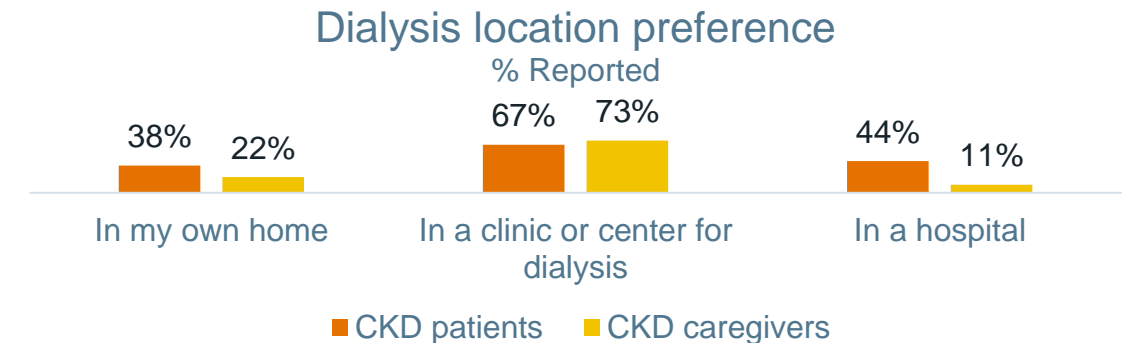
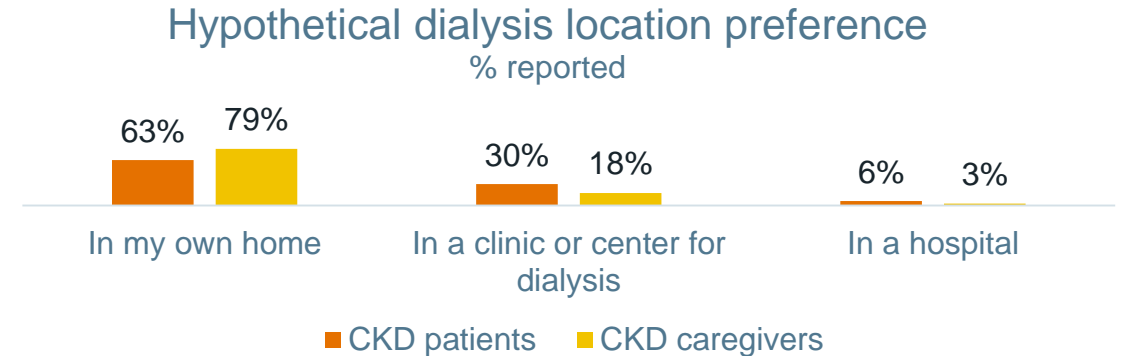
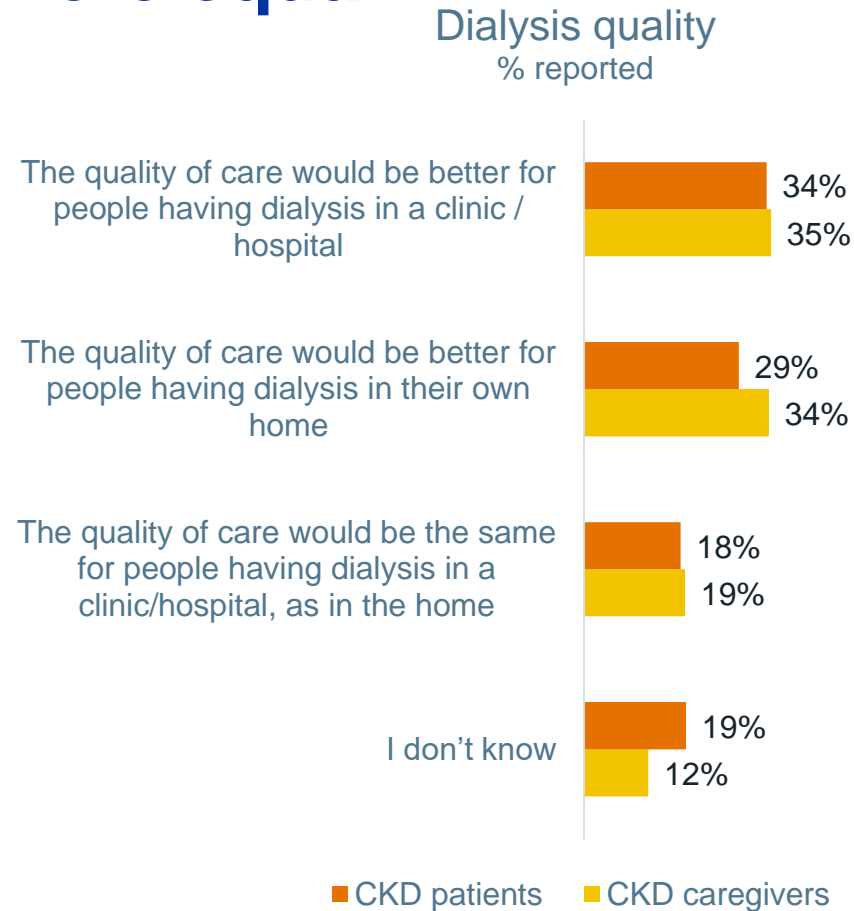


Choice: Ideal world
% reported



Q33: Which of the following dialysis options do you / does the person you are caring for have available, based on options your / their location and current circumstances? | Base: CKD patients (n=141), CKD caregivers (n=104) | Q34: If you / the person you are caring for could receive the same type of quality of care in each of the three locations below, which of the following dialysis options would you / they choose in an ideal world? | Base: CKD patients (n=141), CKD caregivers (n=104) *=small sample size

Dialysis patients think clinic / hospital dialysis provides better quality of care, but would prefer dialysis at home if it were equal.



Q30a: Based on what you know about dialysis treatment, which of the following statements do you agree with? | Base: General public (n=2000), CKD patients (n=500), CKD caregivers (n=250) | Q31a: Please think about a hypothetical scenario. If you were to find out your kidneys have failed, you would need to undergo dialysis. If you could receive the same type of quality of care in each of the three locations below, which of the following dialysis options would you choose? | Base: CKD patients (n=334), CKD caregivers (n=146) | Q32: In what setting do you/ does the person you are caring for receive dialysis? | Base: CKD patients (n=141), CKD caregivers (n=104) *small sample size

**CKD
focus**
63%

 Of CKD
patients not on
dialysis

 Would choose to receive
dialysis **in their homes**

If given the option, people living with CKD who are not on dialysis yet would choose home dialysis.

One of the barriers to home dialysis may be awareness: 61% of CKD patients currently on dialysis say home dialysis is an option for them currently.

30%

 Of CKD
patients not on
dialysis

 Would choose to receive
dialysis **in a clinic**
6%

 Of CKD
patients not on
dialysis

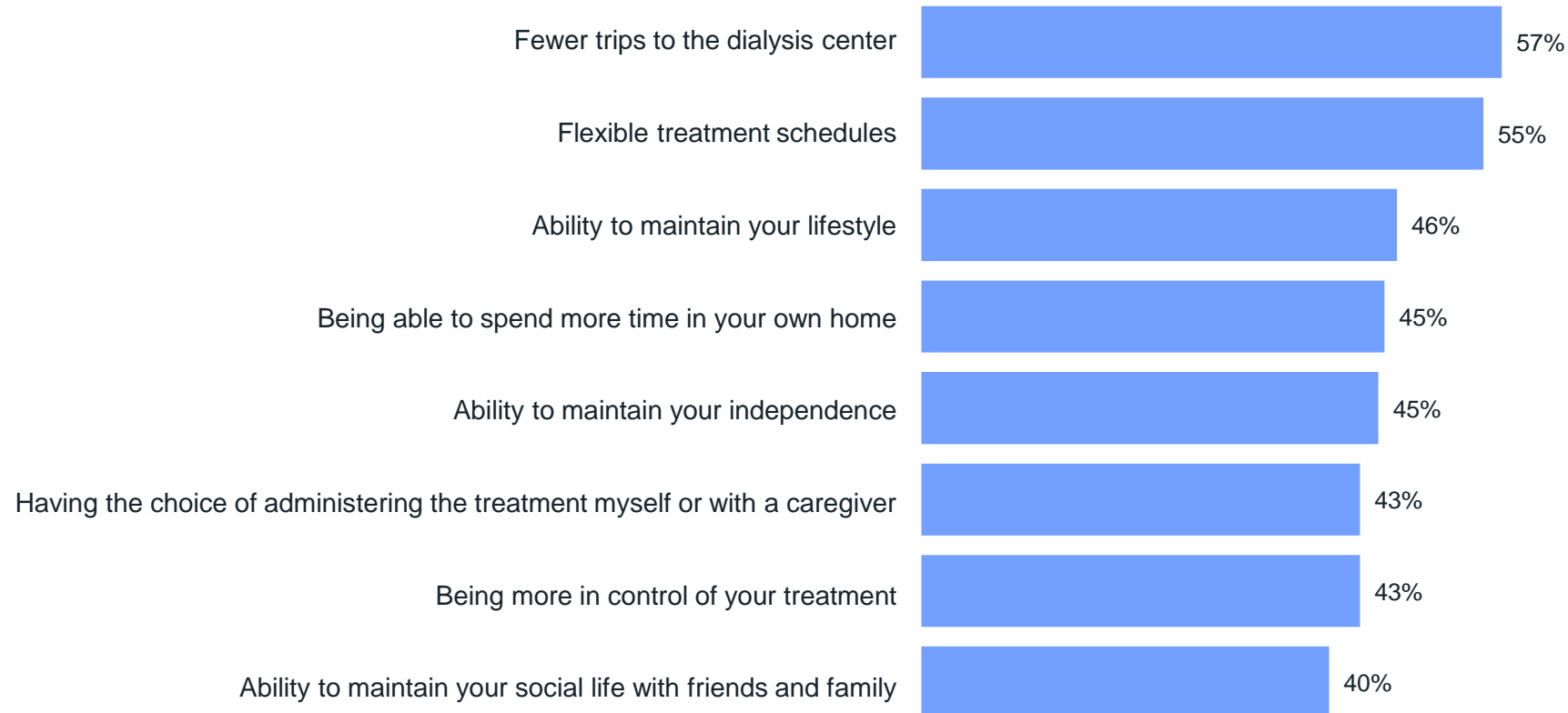
 Would choose to receive
dialysis **in a hospital**

Q31a: Please think about a hypothetical scenario. If you were to find out your kidneys have failed, you would need to undergo dialysis. If you could receive the same type of quality of care in each of the three locations below, which of the following dialysis options would you choose? CKD patients (n=334) | Q33: Which of the following dialysis options do you have available, based on options, your location and current circumstances? Select all that apply. | Base: CKD patients (n=166)

Dialysis patients believe home dialysis would give them flexibility, control, and the ability to maintain a social life.

CKD
focus

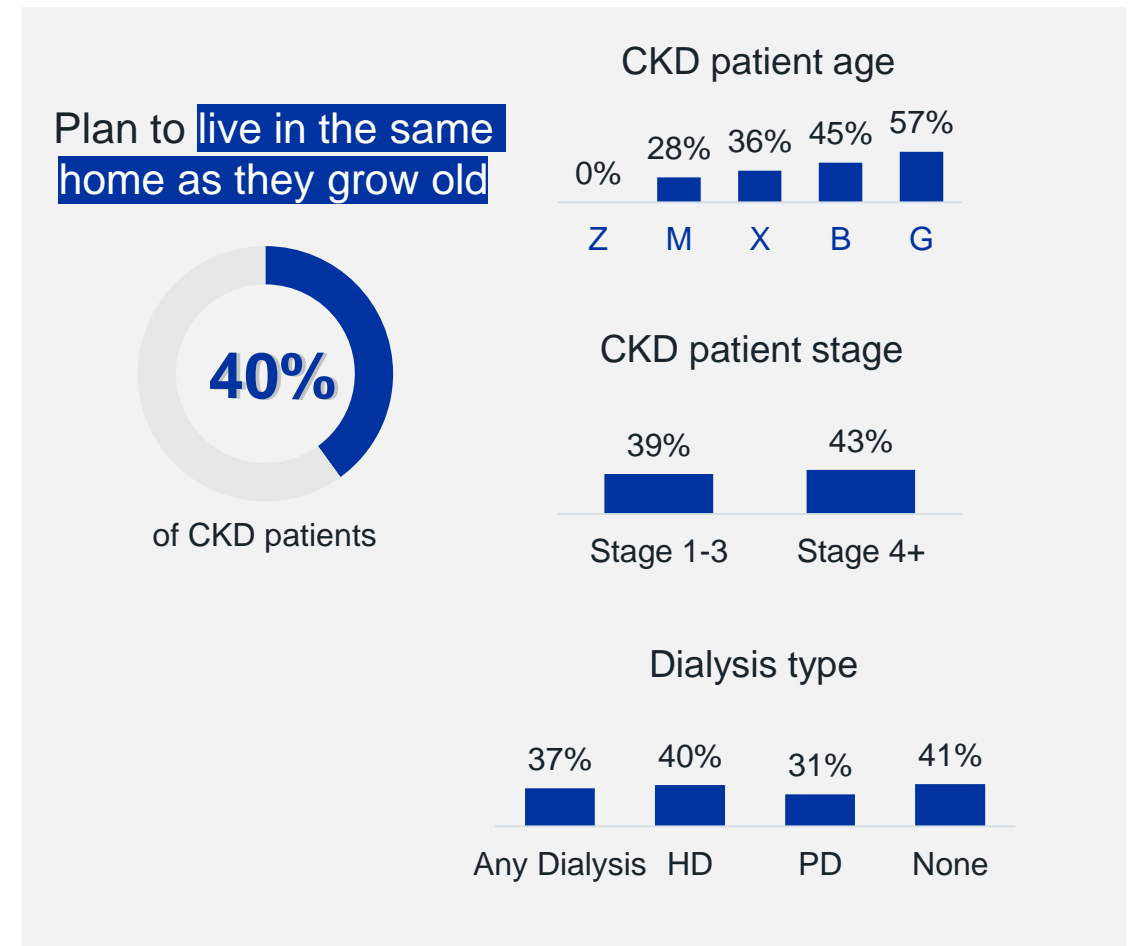
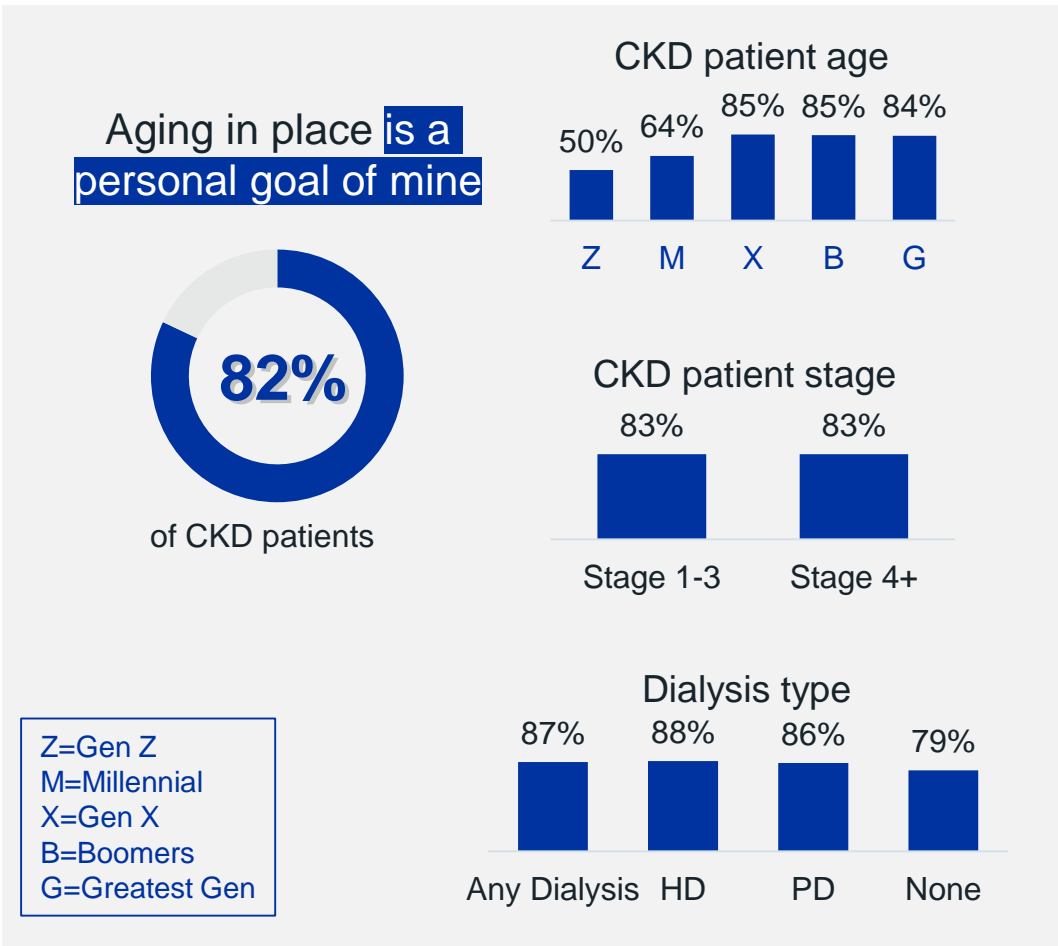
Benefits of home dialysis – for current dialysis patients
% agree



Q35: In your opinion, what would be the main benefits of you / the person you are caring for receiving dialysis treatment in your / their own home. | Base: CKD patients (n=166)

People living with kidney failure (stage 4+) are more likely to plan to age in place.

CKD
focus

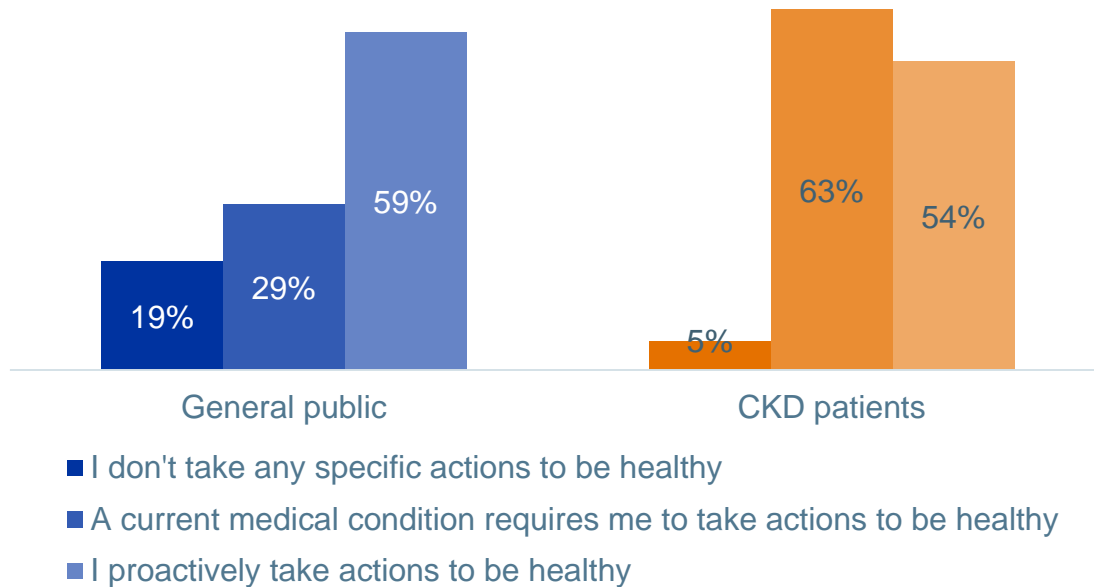


Q15. And, where do you plan to live as you grow older? | Q19. Which of the following words or phrases best describes your view of "aging in place"? | Base: U.S. General public – 18+ (n=2,000), CKD patients (n=500)

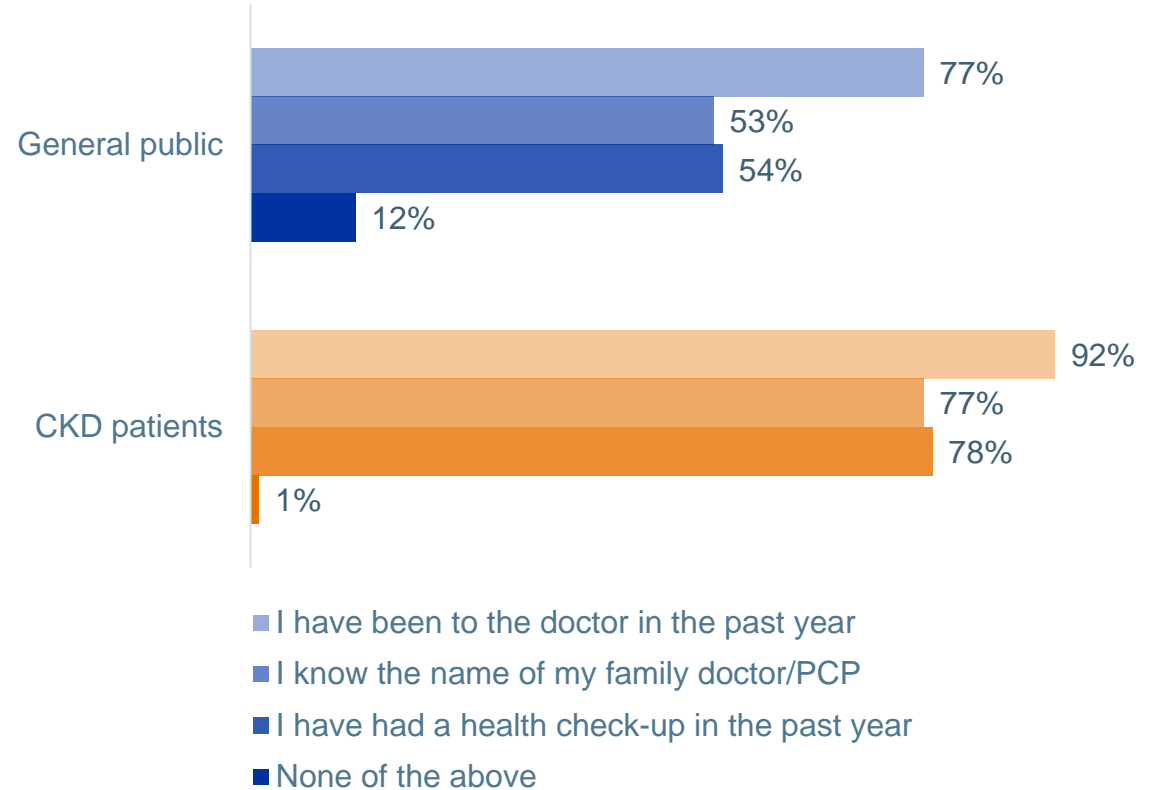
A medical condition prompts people living with CKD to be healthy while the general population proactively does so regardless.

CKD
focus

Health engagement
% reported



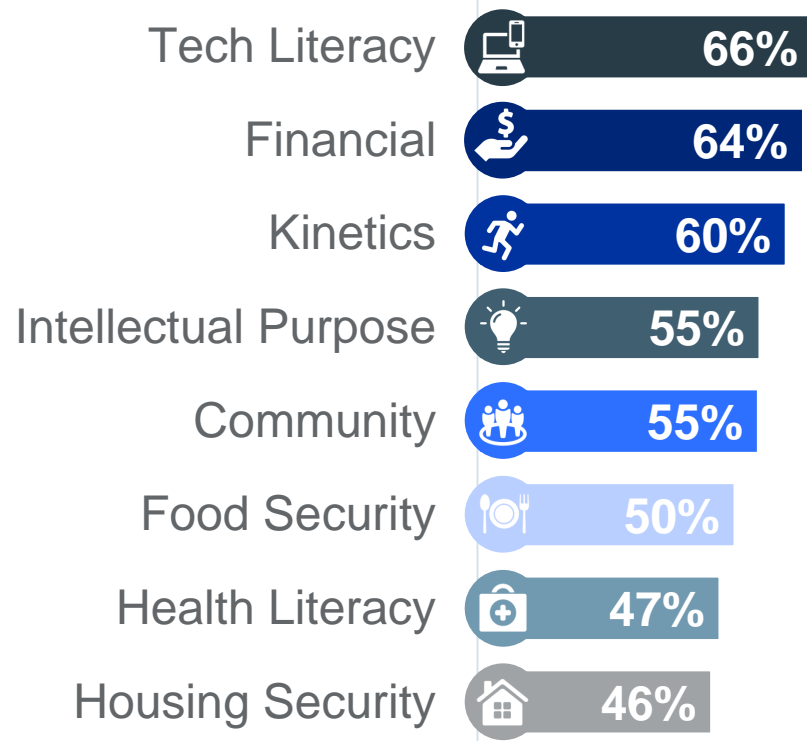
Doctor visits
% reported



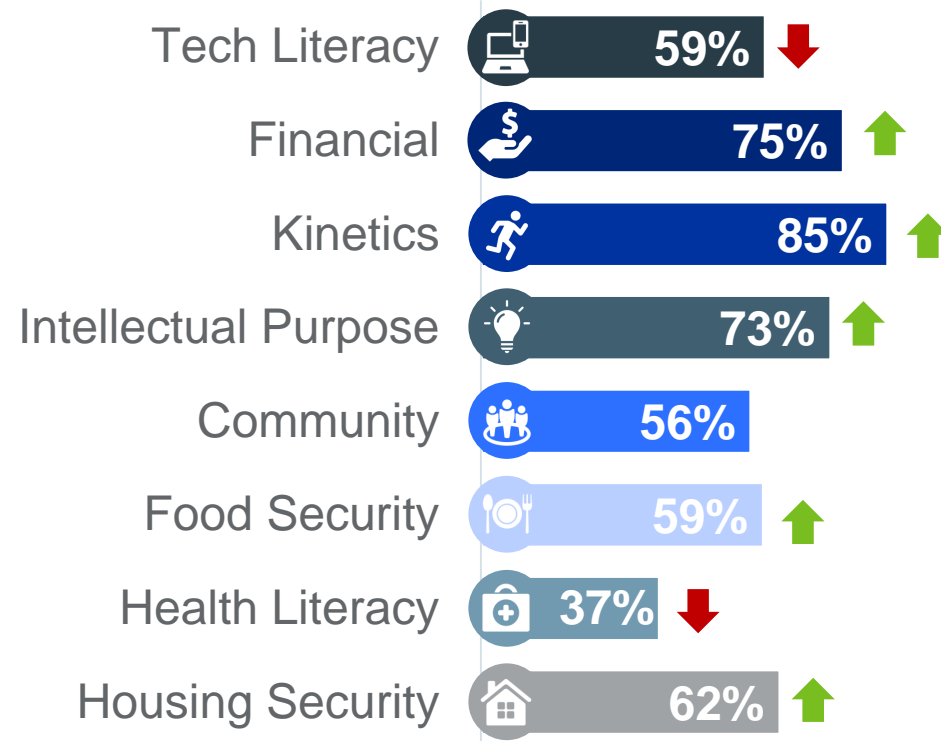
CKD patients are much more likely to be affected by financial, kinetic, and intellectual purpose SDOH.

CKD
focus

Types of SDOH currently experienced – general public
% affected by at least one



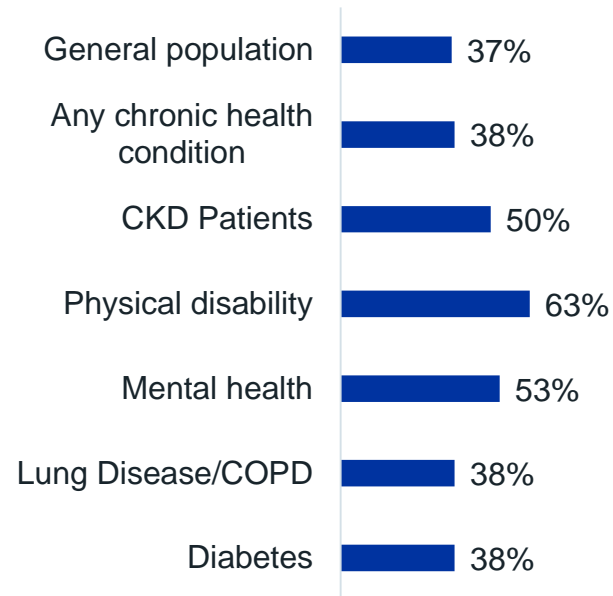
Types of SDOH currently experienced – CKD patients
% affected by at least one



Statistically significant differences, compared to the general population at 90% level: **Sig. more affected /**
Sig. less affected

People living with CKD face similar SDOH challenges to those with a physical disability, though CKD patients are less affected by food insecurity and health literacy.

People with chronic health conditions who are **negatively affected by six or more types of SDOH factors**



Types of SDOH – by health conditions
% affected by types of SDOH

	General Public	Any chronic condition	CKD patient	Physical disability	Mental health	Lung disease/COPD
TECH LITERACY	66%	65%	59%	77%	61%	63%
FINANCIAL	64%	63%	75%	82%	80%	63%
KINETICS	60%	69%	85%	92%	72%	79%
INTELLECTUAL PURPOSE	55%	59%	73%	85%	76%	71%
COMMUNITY	55%	55%	56%	71%	68%	54%
FOOD INSECURITY	50%	48%	59%	65%	69%	54%
HEALTH LITERACY	47%	39%	37%	48%	53%	34%
HOUSING SECURITY	46%	48%	62%	67%	59%	52%

Statistically significant differences, compared to the general population at 90% level:

Sig. more affected / Sig. less affected

Half of CKD patients are unable to work, and 57% say it is difficult to keep up with home maintenance.

CKD
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Types of SDOH – among CKD patients
% affected by types of SDOH

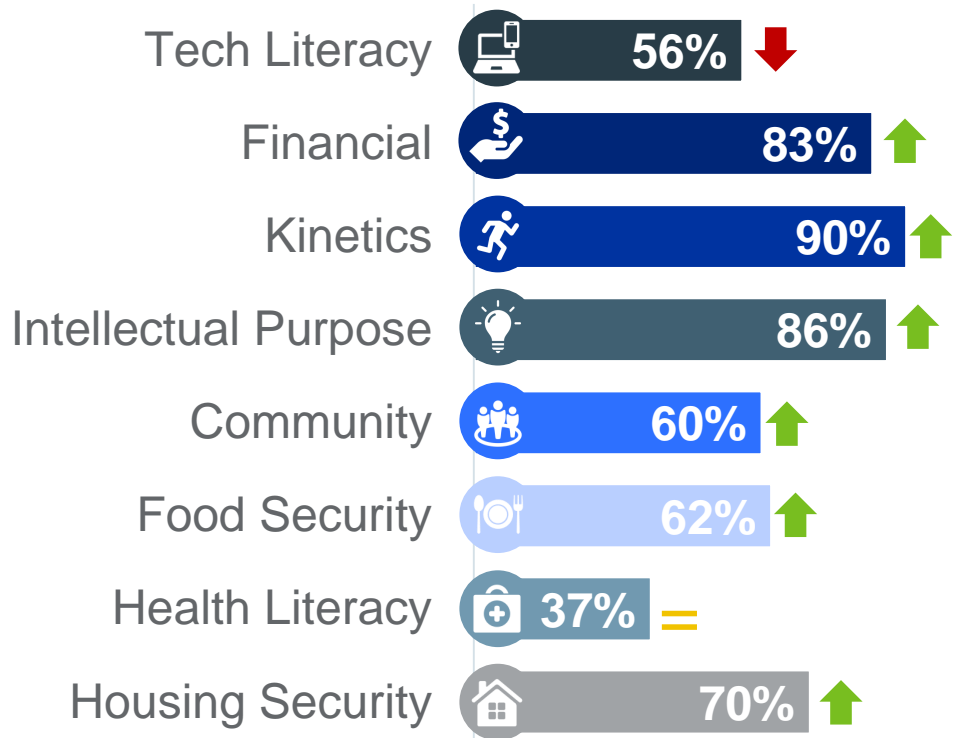
Statistically significant differences, compared to the general population at 90% level: **Sig. more affected /**
Sig. less affected

	TECH LITERACY	FINANCIAL	KINETICS	INTELLECTUAL PURPOSE	COMMUNITY	FOOD INSECURITY	HEALTH LITERACY	HOUSING SECURITY
% of affected by SDOH type	59% ↓	75% ↓	85% ↓	73% ↓	56% ↓	59% ↓	47% ↓	62% ↓
% affected by each statement	26% Do not communicate online with my doctor/pharmacy	56% Not saving money for the future	59% Not physically fit and active	54% Lack purpose and direction	27% Do not feel belonging in community	43% Skip meals/reduce meal size for budget	27% Have trouble understanding doctors' advice	57% Difficulty keeping up with home maintenance
	34% Struggle to use new technology	54% Do not have disposable income for non-essentials	43% Not walking in everyday life	49% Not able to work and earn a living	25% Do not feel safe in community	23% Not eating nutritious meals most days	3% Do not regularly monitor health	11% Do not have enough space to live comfortably
	23% Not accessing the internet on my mobile phone	43% Do not pay bills on time (e.g. gas, phone, credit card)	33% Do not get 15+ minutes of exercise every week	8% Not learning and developing skills	20% Do not have strong social support network	14% Not able to cook fresh meals most days	13% Difficulty understanding medical information	5% Do not live in a stable home
	10% Not managing bills online	23% Do not have enough for everyday expenses	62% Struggle physically doing household tasks	5% Do not make independent decisions	13% Lack access to public spaces or events in community	6% Do not have access to nutritious foods	4% Difficulty in knowing where to find health information	6% Do not live in a safe and comfortable home

People living with kidney failure (stage 4+) are more likely to be affected by these SDOH.

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Most common SDOH affecting Stage 4+ CKD patients



67% of Stage 4+ CKD patients say they are **unable to work and earn a living** (versus 42% of Stage 1-3B CKD patients)



67% of Stage 4+ CKD patients say they are **not physically fit and active** (versus 56% of Stage 1-3B CKD patients)



64% of Stage 4+ CKD patients also say it is **difficult to keep up with the maintenance of their home/living space** (versus 54% of Stage 1-3B CKD patients)



67% of Stage 4+ CKD patients are **not saving for the future** (versus 51% of Stage 1-3B CKD patients)

62% of Stage 4+ CKD patients **do not have enough disposable income for non-essentials**, such as entertainment or vacation (versus 51% of Stage 1-3B CKD patients)

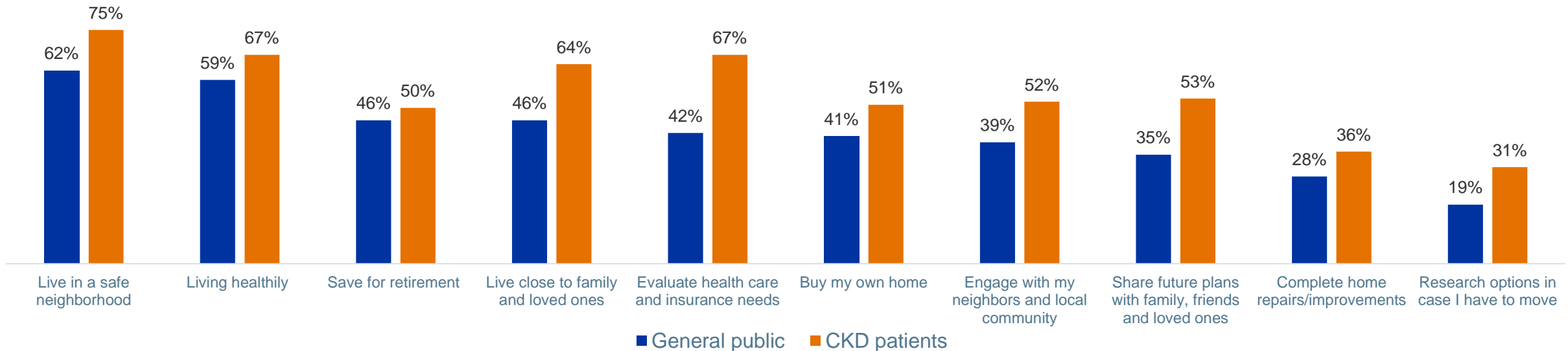
CKD patients are twice as likely to have taken actions that will help them age in place.

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Actions taken to help age in place
% reported

42%

of CKD patients (versus 20% general public) have already started taking actions to enable them to age in place



Q31: Which of the following actions have you taken to help you age in place? And which are you planning to take in the next 5 to 10 years?

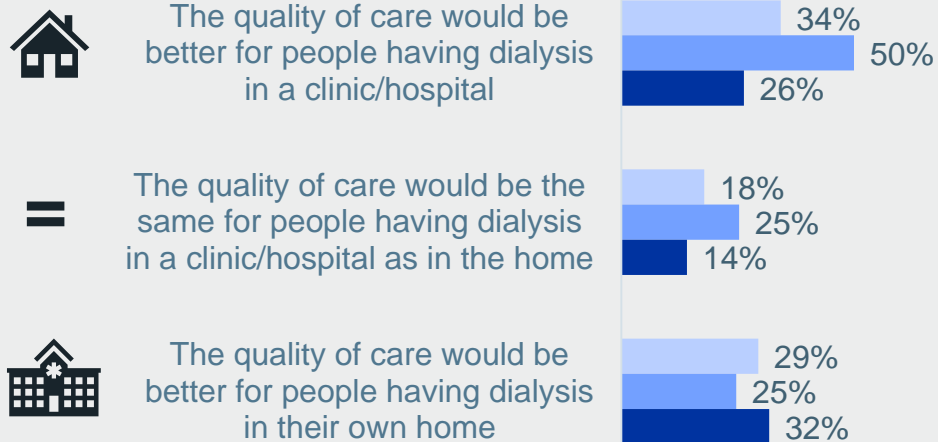
There is interest in home dialysis if the quality of care is the same as in clinic and hospital settings.

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Perceived **quality of care** in clinic/hospital vs. home dialysis

CKD dialysis patients think the quality of care is better in a clinic/hospital (50%) than with home dialysis (25%).

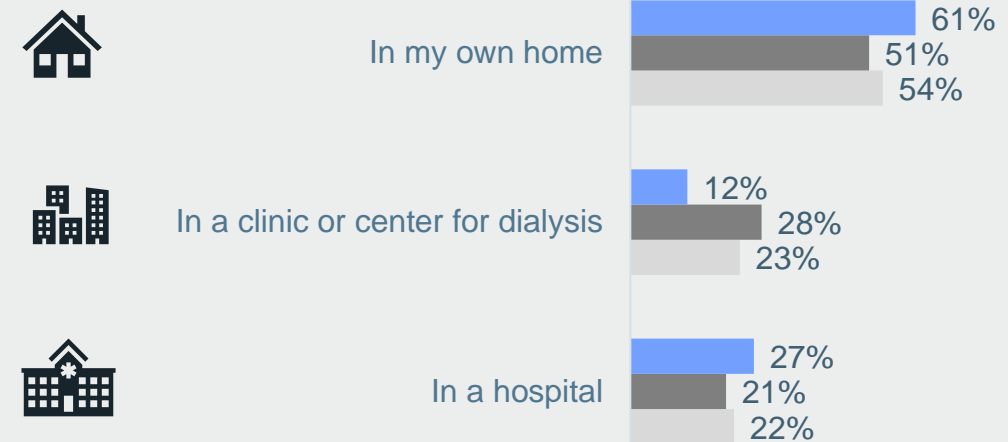
■ CKD patients ■ Dialysis patients
■ CKD patients not on dialysis



Ideal choice of clinic/hospital vs. home dialysis, if quality of care were equal

If the quality of care were equal, 54% dialysis patients would prefer home dialysis, rather than a clinic (23%) or hospital (22%).

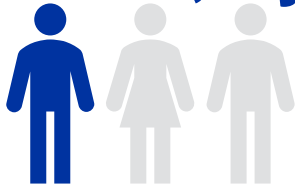
■ PD dialysis patients
■ HD dialysis patients
■ Dialysis patients



Focus on caregivers

A third of the U.S. general, mental health, or physical disability population are family caregivers, mostly for diabetes, hypertension.

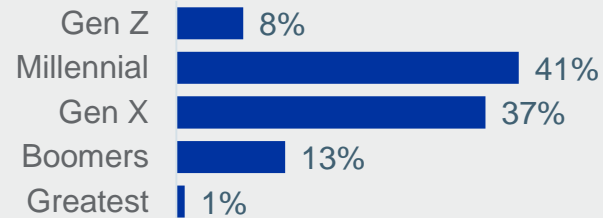
Caregiver
focus



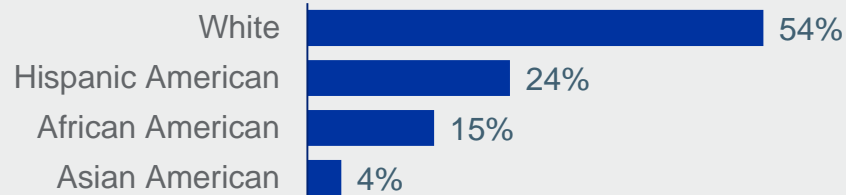
34%

of the U.S. general population are family caregivers of an adult with a chronic health condition.

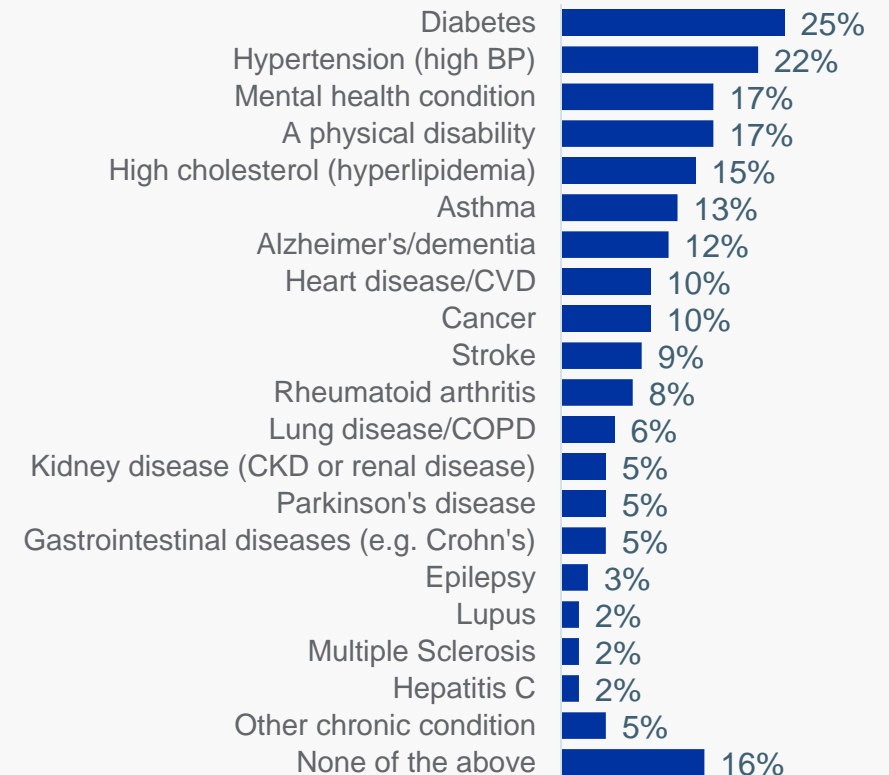
Caregiver generation



Caregiver ethnicity



Caregivers of specific chronic conditions



Three in ten CKD caregivers are millennials.

Caregiver
focus

CKD caregivers

34% are Gen Xers
34% are ages 35-44
74% are white
81% are female

Age



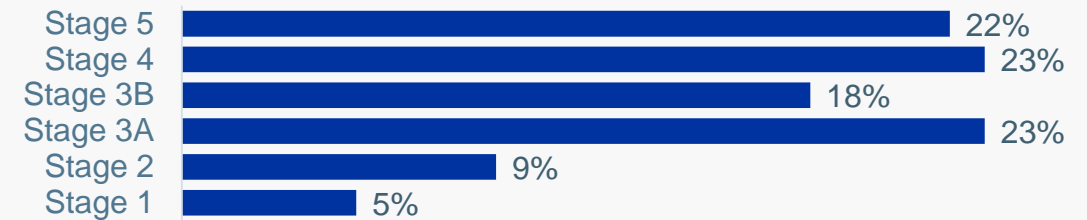
HHI



CKD patients they care for

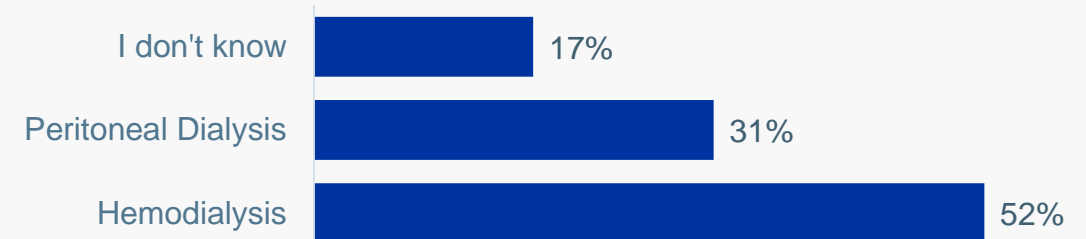
55% have stage 1-3 CKD

Severity



42% of patients are undergoing dialysis

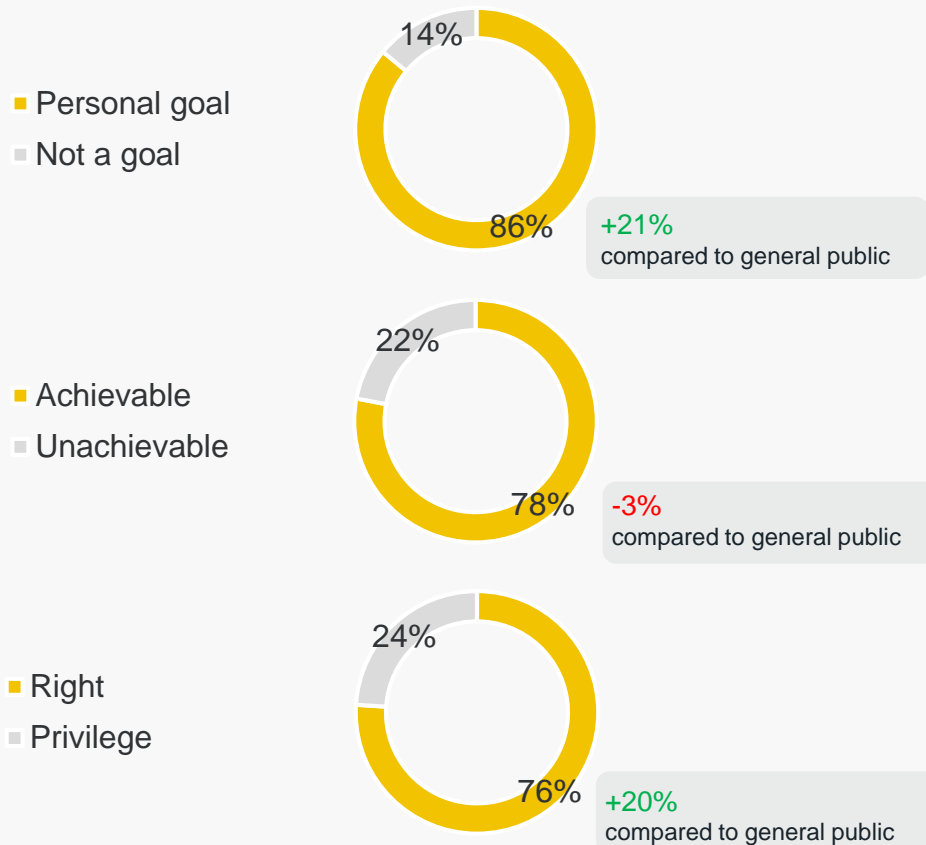
Type of dialysis



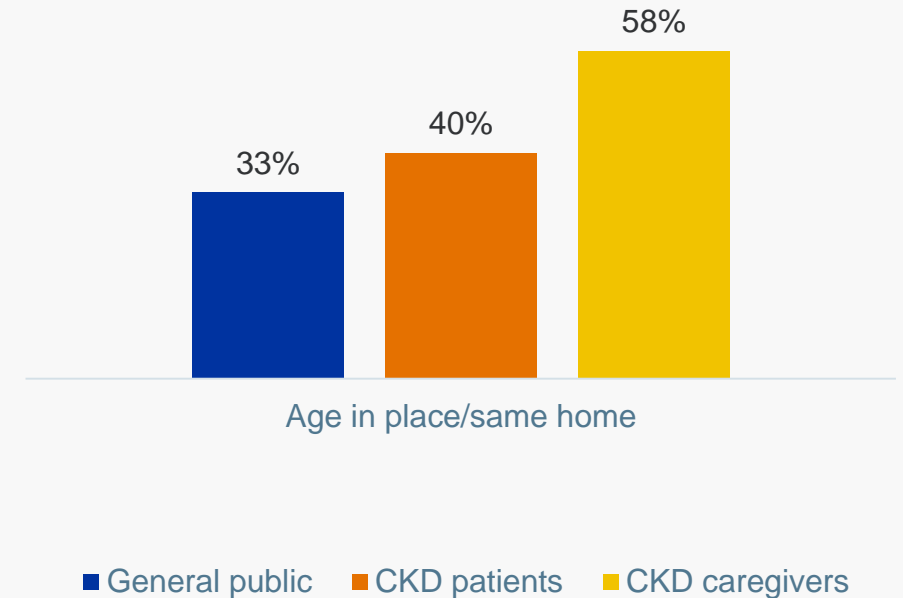
CKD caregivers are more likely than the general population to see aging in place as a goal for the adult they care for.

Caregiver
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Aging in place is...



Aging in place % reported

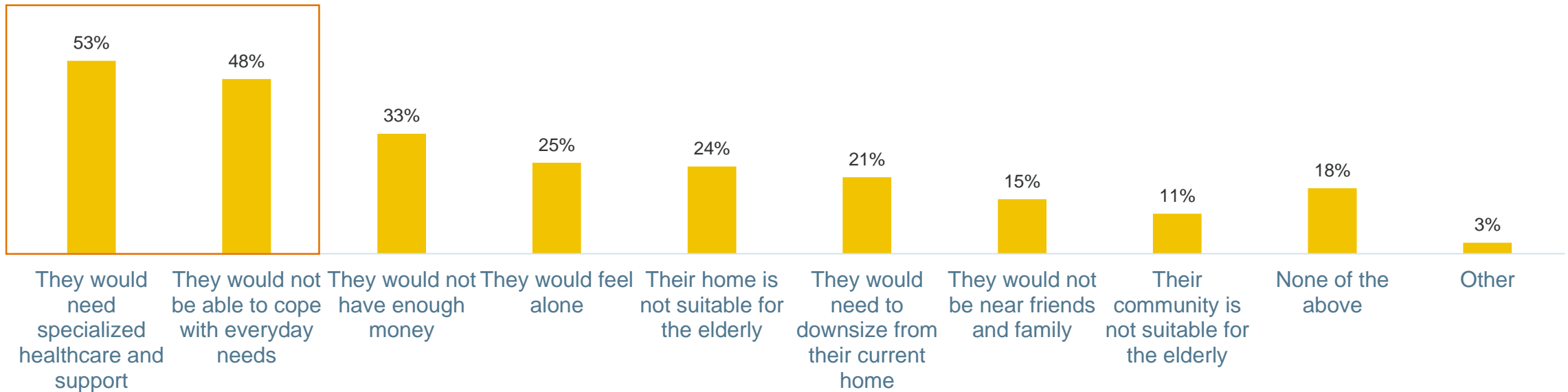


Caregivers say specialized healthcare and everyday needs would prevent the adult that they care for from aging in place.

Caregiver
focus

Barriers to aging in place % reported

■ CKD caregivers

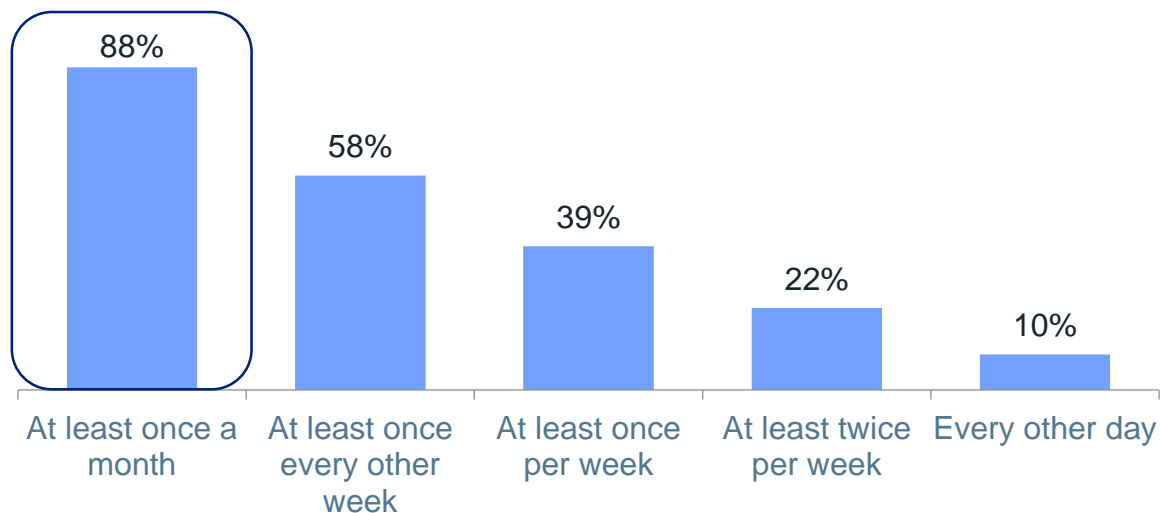


Q22. Are any of the following reasons why you would not be able to live in the same home or community when growing older? | Q23. Are any of the following reasons why the person you care for would not be able to live in the same home or community when growing older? | Base: CKD caregivers n=250

Seven of eight dialysis patients visit their doctor monthly or more,

but find it difficult to travel there.

Doctor appointment frequency



AND

14%

describe traveling to the doctor as difficult or very difficult.

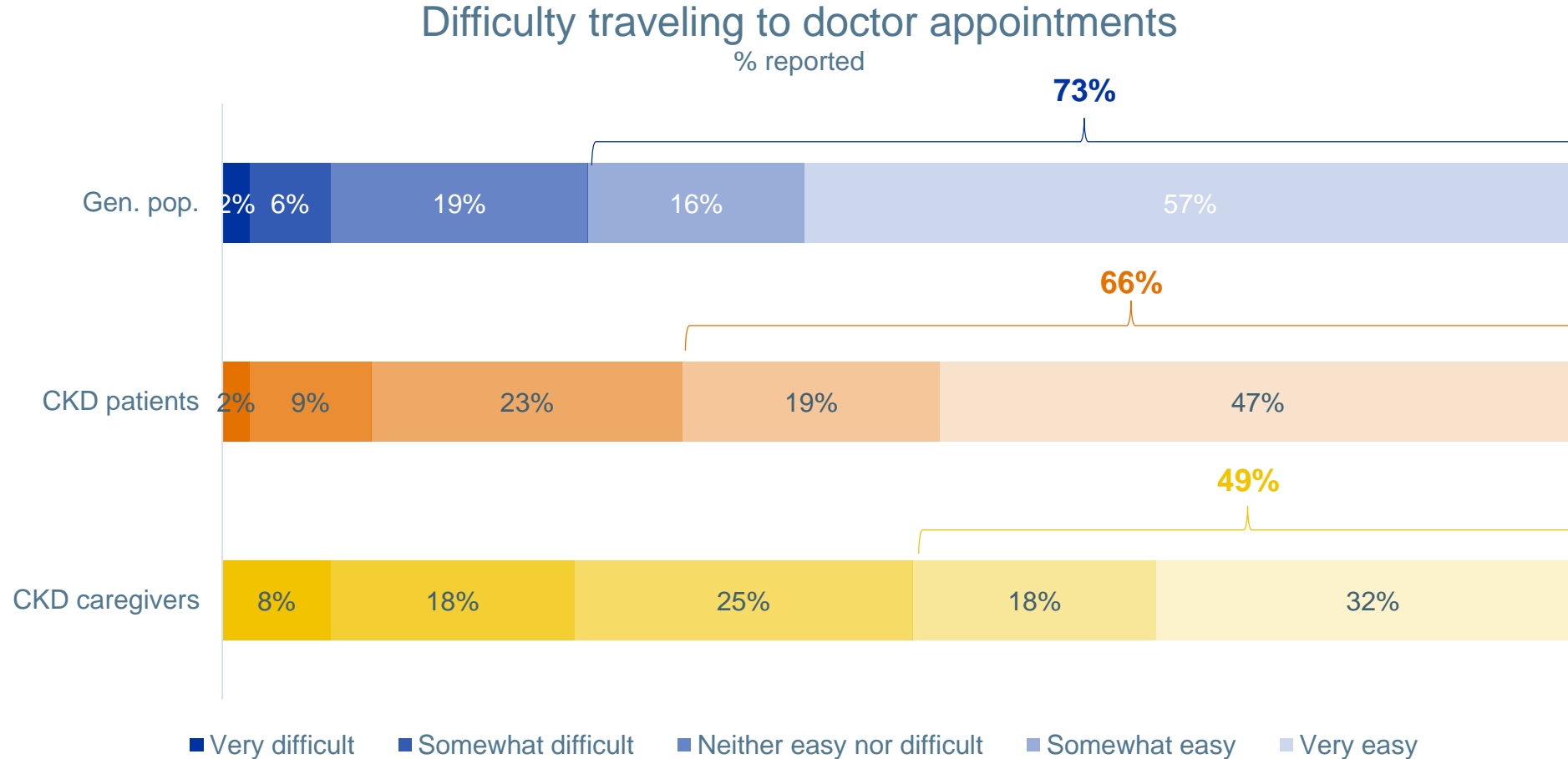
Q28a. On a scale 1-5, how easy or difficult is it for you to travel to your doctor appointments?

Q29a. In an average month, how often do you need to go to doctor's appointments?

Base: Patients on dialysis (n=166)

A third of CKD caregivers say it is difficult for the adult they care for to travel to doctor appointments.

Caregiver
focus

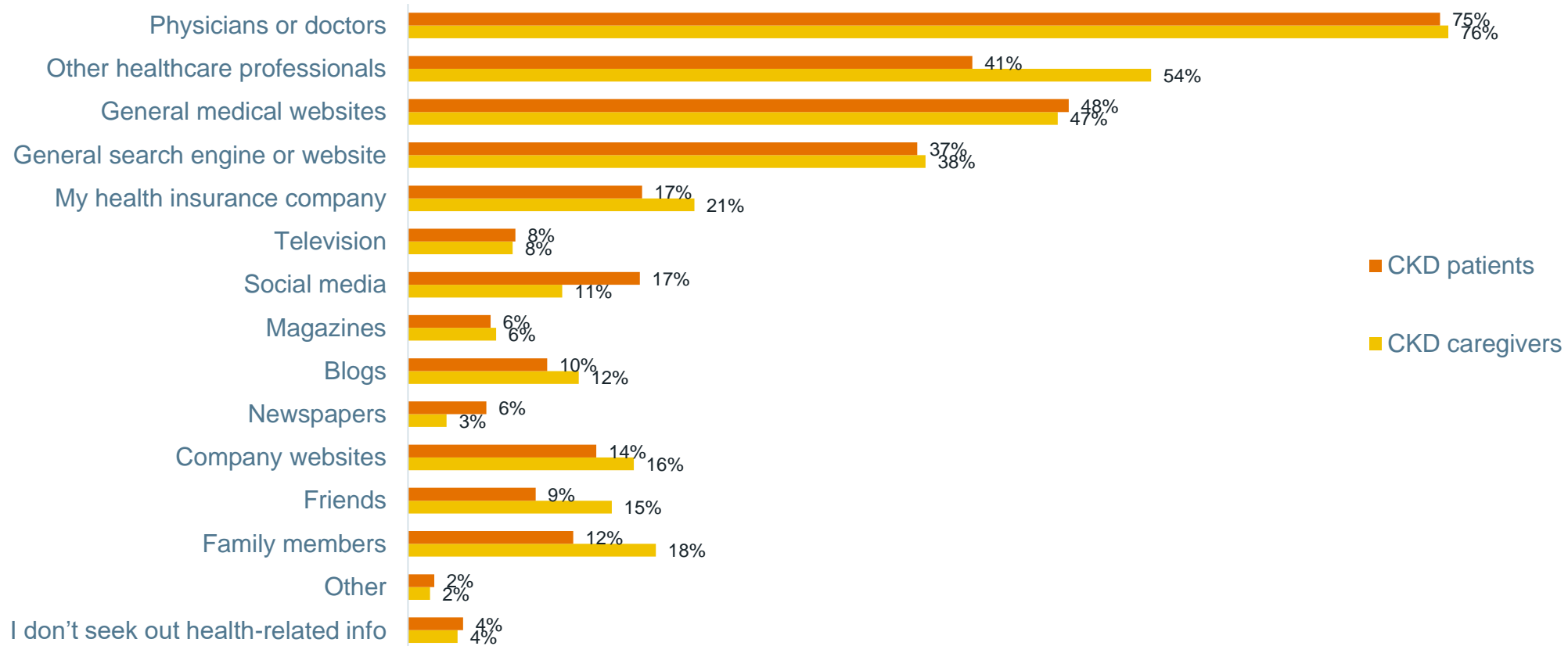


Q28a. On a scale of 1-5, how easy or difficult is it for you to travel to your / the person you care for's doctor appointments? | Base: General public n=2000, CKD patients n=500, CKD caregivers n=250

Healthcare providers are key sources for information, though people living with CKD are looking online via search and social.

Caregiver
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Sources for CKD-related information
% reported

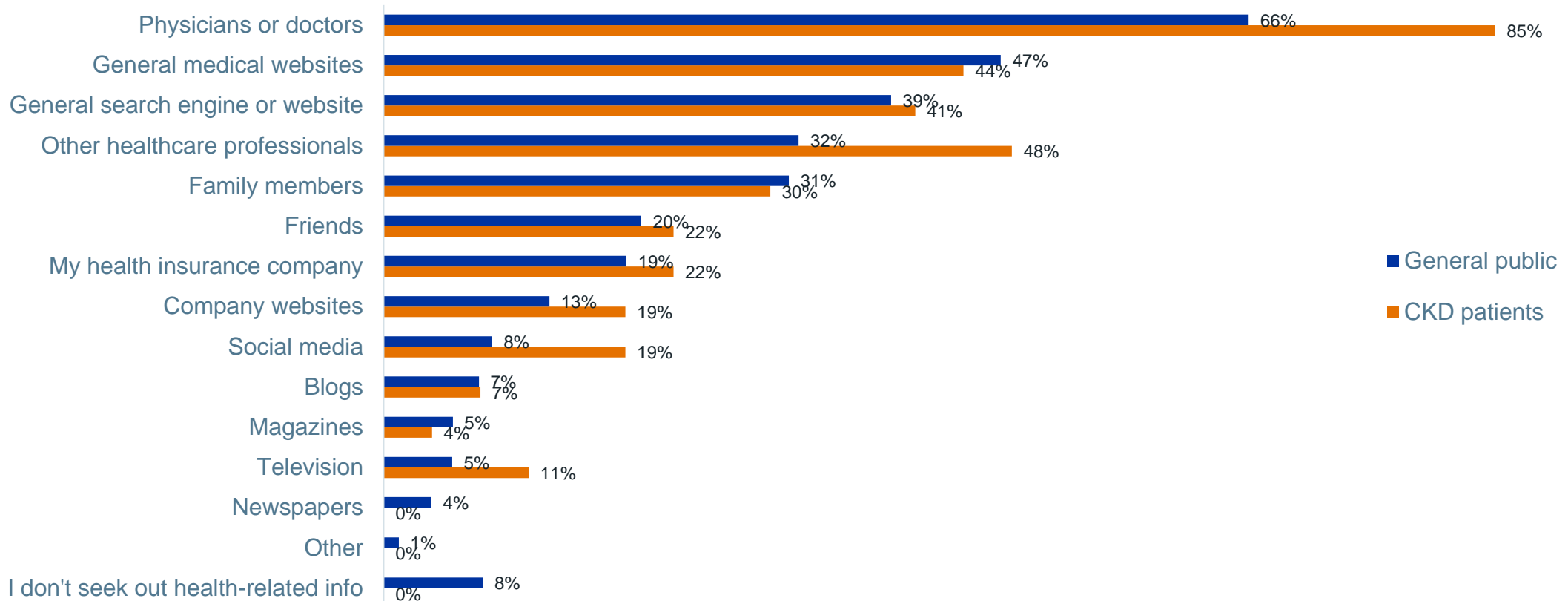


Q38. Where do you typically go to for CKD-related information or for answers to CKD-related questions you may have (e.g., about certain procedures, treatments, health issues, etc.)?
Base: CKD patients n=475, CKD caregivers n=250

Doctors and medical-related websites continue to be the most visited sources for health questions.

Caregiver
focus

Sources for general health-related information
% reported



Q37. Where do you typically go for health-related information or for answers to health-related questions you may have (e.g., about certain procedures, treatments, health issues, etc.)? | Base: General public n=2000, CKD patients n=500

SAMPLE PROFILES

General population – sample profile

<u>GENDER</u>	
Male	48%
Female	52%

<u>GENERATION</u>	
Adult Gen Z (18-22)	9%
Millennials (23-38)	28%
Gen X (39-54)	26%
Boomers (55-73)	32%
Greatest Gen (74+)	5%

<u>REGION</u>	
New England	4%
Mideast	16%
Great Lakes	15%
Southeast	26%
Plains	7%
Southwest	12%
Rocky Mountains	4%
Far West	16%

<u>HOUSEHOLD INCOME</u>	
Low HHI	31%
Average HHI	31%
High HHI	34%

<u>PARENTAL STATUS</u>	
Parents	24%
Non-Parents	66%

CKD patients – sample profile

CHRONIC CONDITION DIAGNOSIS		Hepatitis C		3%		STAGE OF KIDNEY DISEASE		CURRENT DIALYSIS							
Kidney disease	100%	Epilepsy		3%		Stage 1 with normal or high GFR (GFR>90 mL/min)		7%							
Hypertension	53%	Multiple sclerosis		2%		Stage 2 Mild CKD (GFR=60-89 mL/min)		11%							
High cholesterol	37%	Alzheimer’s/Dementia		2%		Stage 3A Moderate CKD (GFR=45-59 mL/min)		40%							
Diabetes	32%	GENERATION		Adult Gen Z (18-22)		1%		Stage 3B Moderate CKD (GFR=30-44 mL/min)		18%					
Mental health condition	27%	Millennials (23-38)		13%		Stage 4 Severe CKD (GFR=15=29 mL/min)		12%		TYPE OF DIALYSIS					
Heart disease/CVD	19%	Gen X (39-54)		34%		Stage 5 End Stage Renal Disease (ESRD) (GFR<15 mL/min)		12%		Hemodialysis		67%			
A physical disability	15%	Boomers (55-73)		43%		HOUSEHOLD INCOME		Low HHI		39%		Peritoneal dialysis		33%	
Asthma	13%	Greatest Gen (74+)		9%		Average HHI		25%		I don’t know		0%			
Gastrointestinal diseases	12%	REGION		New England		25%		High HHI		35%		KIDNEY TRANSPLANT			
Lung disease/COPD	12%	Midwest		2%		Male		47%		Yes		24%			
Cancer	12%	Great Lakes		12%		Female		53%		No – but on a transplant waitlist		8%			
Rheumatoid arthritis	8%	Southeast		7%		PARENTAL STATUS		Parents		33%					
Other chronic condition	8%	Plains		30%		Non-Parents		67%							
Stroke	7%	Southwest		13%											
Lupus	5%	Rocky Mountains		10%											
Parkinson’s disease	3%	Far West		1%											
S7 / S10 / S11 / D6 / S12															

CKD caregivers – sample profile

<u>CHRONIC CONDITION CARE</u>				<u>STAGE OF KIDNEY DISEASE</u>		<u>CURRENT DIALYSIS</u>	
Kidney disease	100%	Lupus	5%	Stage 1 with normal or high GFR (GFR>90 mL/min)	5%	Yes	42%
Hypertension	55%	Multiple sclerosis	5%	Stage 2 Mild CKD (GFR=60-89 mL/min)	9%	No	58%
Diabetes	47%	Epilepsy	4%	Stage 3A Moderate CKD (GFR=45-59 mL/min)	23%	<u>TYPE OF DIALYSIS</u>	
Heart disease/CVD	35%	Other chronic condition	5%	Stage 3B Moderate CKD (GFR=30-44 mL/min)	18%	Hemodialysis	52%
<u>GENERATION</u>		<u>REGION</u>		Stage 4 Severe CKD (GFR=15-29 mL/min)	23%	Peritoneal dialysis	31%
High cholesterol	32%	Adult Gen Z (18-22)	2%	Stage 5 End Stage Renal Disease (ESRD) (GFR<15 mL/min)	22%	I don't know	17%
Mental health condition	32%	Millennials (23-38)	29%	<u>KIDNEY TRANSPLANT</u>		Yes	8%
A physical disability	32%	Gen X (39-54)	34%			No – but on a transplant waitlist	18%
Lung disease/COPD	24%	Boomers (55-73)	34%	<u>HOUSEHOLD INCOME</u>		No – and not on a transplant waitlist	75%
Alzheimer's/Dementia	22%	Greatest Gen (74+)	2%	Low HHI	33%	<u>GENDER</u>	
Stroke	20%	<u>REGION</u>		Average HHI	32%	Male	19%
Rheumatoid arthritis	20%	New England	3%	High HHI	34%	Female	81%
Asthma	17%	Mideast	16%				
Cancer	16%	Great Lakes	16%				
Gastrointestinal diseases	15%	Southeast	32%				
Hepatitis C	6%	Plains	3%				
Parkinson's disease	6%	Southwest	14%				
		Rocky Mountains	2%				
		Far West	15%				