
An Overview of Geriatric considerations in COVID-19

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Objectives – Pharmacists

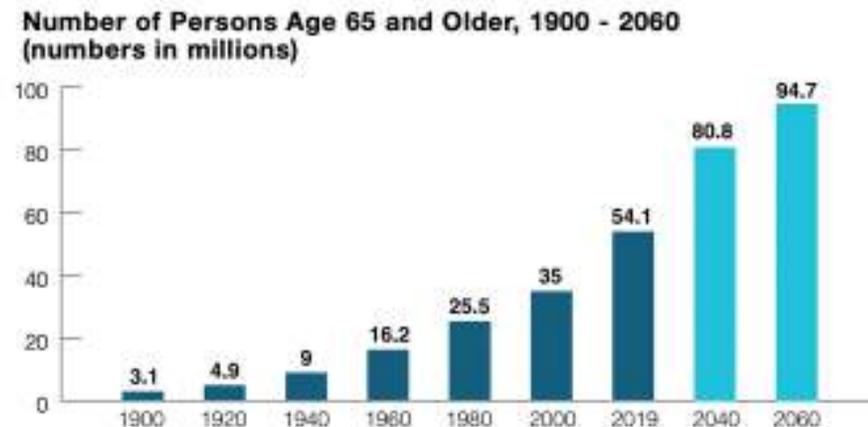
- Describe the impact of the COVID-19 pandemic in older adults
- Identify barriers to care for older adults during the pandemic
- Demonstrate strategies to optimize care for older adults during the pandemic

Objectives – Pharmacy Technicians

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Background – Older Adults

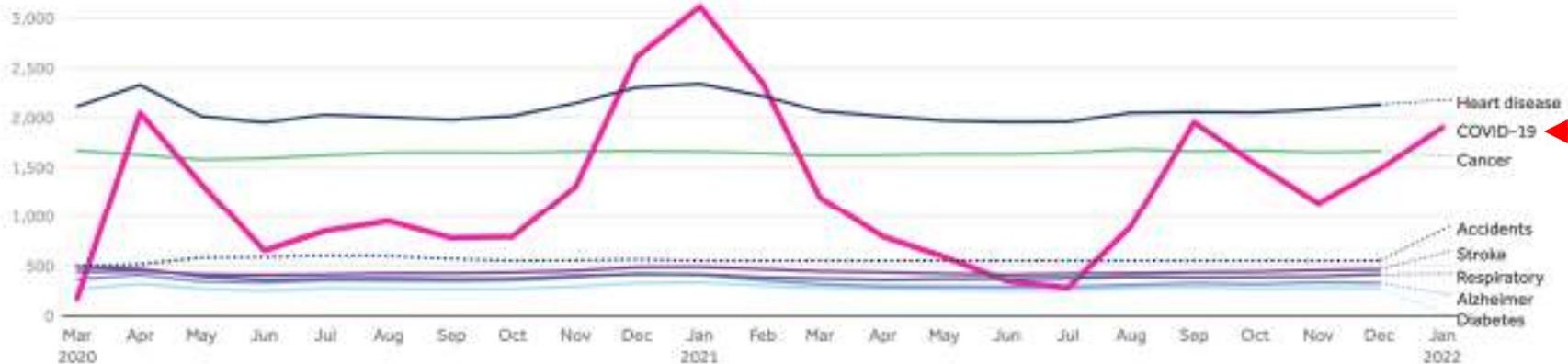
- U.S. population is rapidly aging
 - 54.1 million (16%) in 2019 to 80.8 million (21.6%) by 2040 (pre-pandemic)
- Racial/ethnic minorities in the U.S. are growing
 - 7.8 million in 2009 (20% of older adults) to 12.9 million in 2019 (24% of older adults)
 - Projected increase to 27.7 million in 2040 (34% of older adults)



COVID: Leading Cause of Death

- COVID-19 has become a top cause of illness and death in the U.S.

Average daily deaths in the United States, by cause (March 2020 - January 2022)



Notes: For accidents in 2021, the 2020 daily average is plotted. Respiratory disease represents chronic lower respiratory disease.

Source: KFF analysis of CDC mortality and KFF COVID-19 tracker • [Get the data](#) • [PNG](#)

Pewson KFF
Health System Tracker

COVID-19: Leading Cause of Death

- Older adults are disproportionately impacted by COVID-19

Top 5 leading causes of death in the U.S. (number of deaths in the month), by age, December 2021

Rank	5-14	15-24	25-34	35-44	45-54	55-64	65-74	75-84	85+
1	Accidents (1,241)	Accidents (980)	Accidents (2,043)	Accidents (2,006)	COVID-19 (3,334)	Cancer (8,898)	Cancer (14,557)	Heart disease (13,738)	Heart disease (20,004)
2	Cancer (84)	Suicide (498)	Suicide (872)	COVID-19 (1,595)	Cancer (2,772)	COVID-19 (7,697)	Heart disease (7,196)	Cancer (13,324)	Cancer (8,313)
3	Suicide (40)	Homicide (394)	COVID-19 (873)	Heart disease (1,009)	Heart disease (2,772)	Heart disease (7,261)	COVID-19 (10,844)	COVID-19 (10,893)	COVID-19 (5,838)
4	Congenital (32)	COVID-19 (148)	Homicide (443)	Cancer (900)	Accidents (1,947)	Accidents (2,074)	Chronic respiratory (5,002)	Chronic respiratory (3,896)	Alzheimer disease (8,178)
5	Homicide (29)	Cancer (106)	Heart disease (320)	Suicide (627)	Liver disease (675)	Diabetes (1,529)	Stroke (2,317)	Stroke (3,629)	Stroke (5,458)

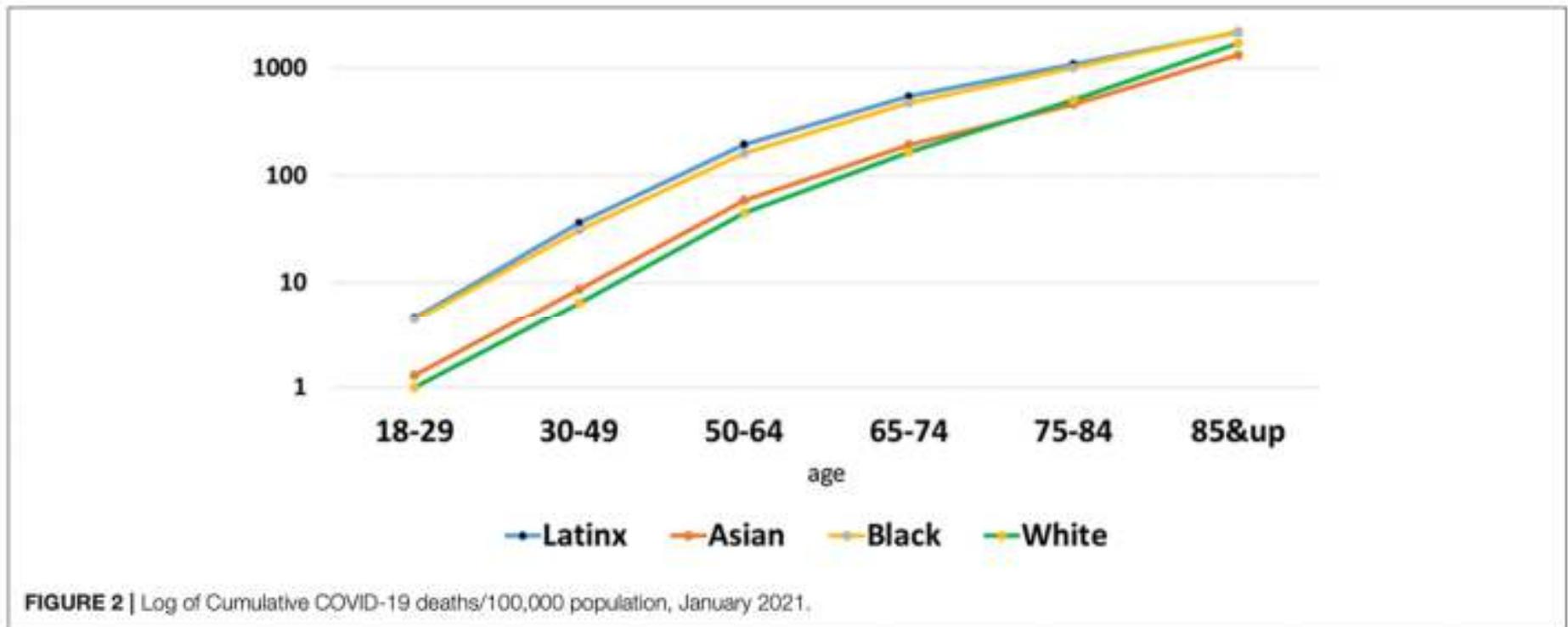
Note: COVID-19 ranked as the #2 cause of death across all age groups in December 2021, and it was the #7 cause of death for 5-14 year olds (not shown).

Source: KFF analysis of CDC data • [Get the data](#) • PNG

COVID-19: Hospitalization and Death

Rate ratios compared to 18-29 year olds	0-4 years	5-17 years	18-29 years	30-39 years	40-49 years	50-64 years	65-74 years	75-84 years	85+ years
HOSPITALIZATION ¹	4x lower	9x lower	Comparison Group	2x higher	3x higher	4x higher	5x higher	8x higher	13x higher
DEATH ²	9x lower	16x lower	Comparison Group	4x higher	10x higher	30x higher	90x higher	220x higher	630x higher

COVID-19: Death by Race



Guerrero LR et al. (2021) *Frontiers in Public Health*. 9

COVID-19: Risk Factors in Older Adults

- Comorbidities
 - Chronic lung disease, cardiovascular disease, hypertension, diabetes
- Frailty: decreased physiological reserve and ability to tolerate biological stress
 - Predictor of adverse outcomes, mortality, disability, hospitalization, institutionalization
- Institutional settings increased risk of transmission and death
- Racial and ethnic minorities

Symptoms of COVID-19

- 1/3 of older adult patients do not present with 'typical' symptoms
- Atypical symptoms at presentation include
 - Delirium
 - Weakness
 - Fall
 - Anorexia
 - Dizziness/fainting
- Acute ischemic stroke
 - Risk noted to be 10 times as high during the first 3 days of diagnosis of COVID as during the control period for those aged 65-74 years, (95% CI, 10.30-11.68)

Kennedy M et al. (2020) *JAMA Netw Open.* 3(11)

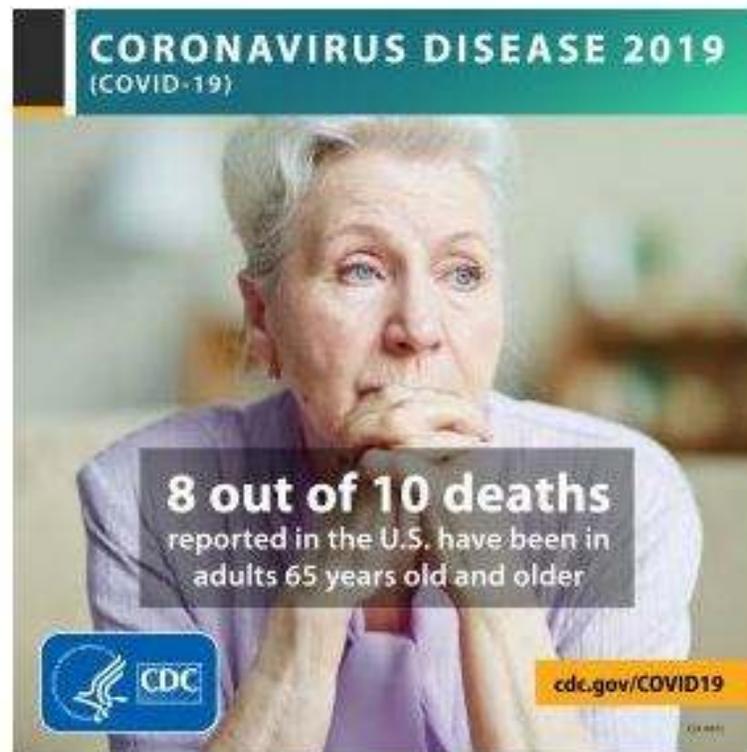
Yang Q et al (2022) *Stroke*; ATMP16

Table 2. Symptoms and Signs at Emergency Department Presentation in Older Adults With Coronavirus Disease 2019

Symptoms	Patients, No. (%) (N = 813)
Symptom at presentation	
Fever	459 (56)
Shortness of breath	420 (51)
Cough	412 (50)
Hypoxia (oxygen saturation <90%)	324 (40)
Weakness	241 (30)
Delirium	226 (28)
Fatigue	210 (26)
Diarrhea	130 (16)
Anorexia	122 (15)
Myalgia	99 (12)
Fall	91 (11)
Dizziness, fainting	70 (9)
Abdominal pain	66 (8)
Acute respiratory failure	54 (7)
Headache	51 (6)
Chest pain	50 (6)
Sore throat	48 (6)
Other symptoms ^a	106 (13)
Delirium at presentation (n = 226)	
Delirium as main or primary presenting symptom	37 (16)
Delirium present without fever or shortness of breath	84 (37)
Approach for delirium identification	
Delirium assessment tool	90 (22)
Physician assessment	178 (79)
Nursing assessment	133 (59)
Delirium symptoms present	
Impaired consciousness	122 (54)
Disorientation	96 (43)
Inattention	71 (31)
Disorganized thinking	59 (26)
Hypoactive delirium	45 (20)
Agitation or hyperactive delirium	35 (16)
Memory loss	18 (8)
Hallucinations	7 (3)
Duration of delirium symptoms before emergency department presentation	
<2 d	112 (50)
Between 2 d to 1 wk	60 (27)
>1 wk	8 (4)
Not reported	36 (16)

Kennedy M et al.
 (2020) *JAMA Netw Open.* 3(11)

COVID-19: Older Adults and Death



Learner Assessment Question 1

Q. Which of the following is true?

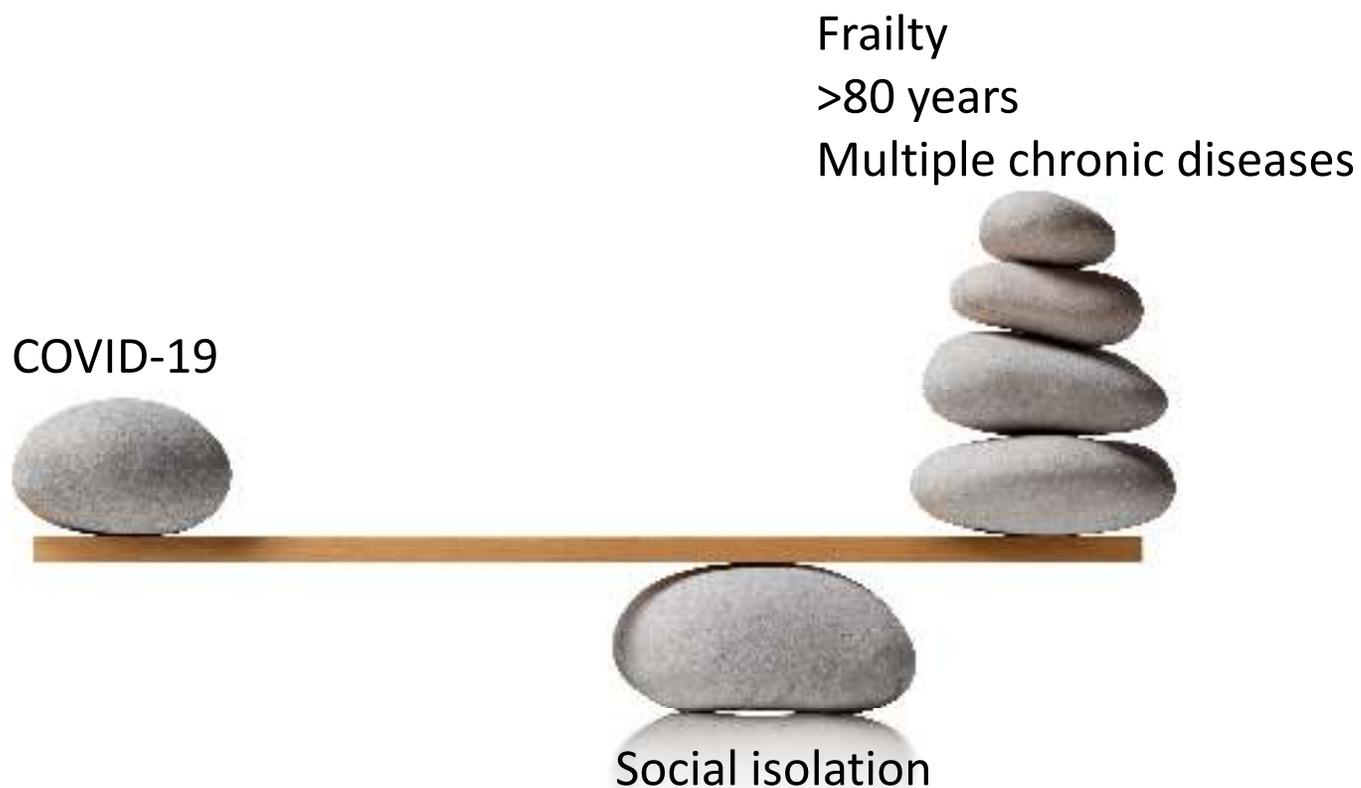
- A. Older age categories did NOT have an association between higher rates of hospitalization and death
- B. Strokes were the #1 cause of death in older adults during the pandemic
- C. Between April 2020 and January 2021, COVID-19 has consistently remained as a leading cause of death in older adults
- D. Racial/ethnic minority older adults had similar rates of death from COVID-19 compared to white older adults

Barriers to care

COVID-19 Pandemic: Barriers to Care

- Challenges with finding a balance
- Social Isolation
- Discrimination
- Income inequality
- Housing inequality
- Poor healthcare infrastructure
- Negative impact on daily living
- Lack of clinical data
- Digital divide

Finding a Balance



- Higher risk of mortality from COVID-19
- Higher rates of morbidity and mortality from acute and chronic conditions

Social Isolation

- Reduced availability of community-based long-term care services
 - Adult-day care, respite care, homemakers, meals on wheels, home health aides
- Nursing home residents
 - Reduced opportunity for family visits, i.e., links to the 'outside world'
- Social isolation increases the risk of physical and mental health concerns
 - Hypertension, heart diseases, obesity, depression, anxiety, poor cognitive functioning, increases risk of Alzheimer's disease, mortality, deconditioning, falls

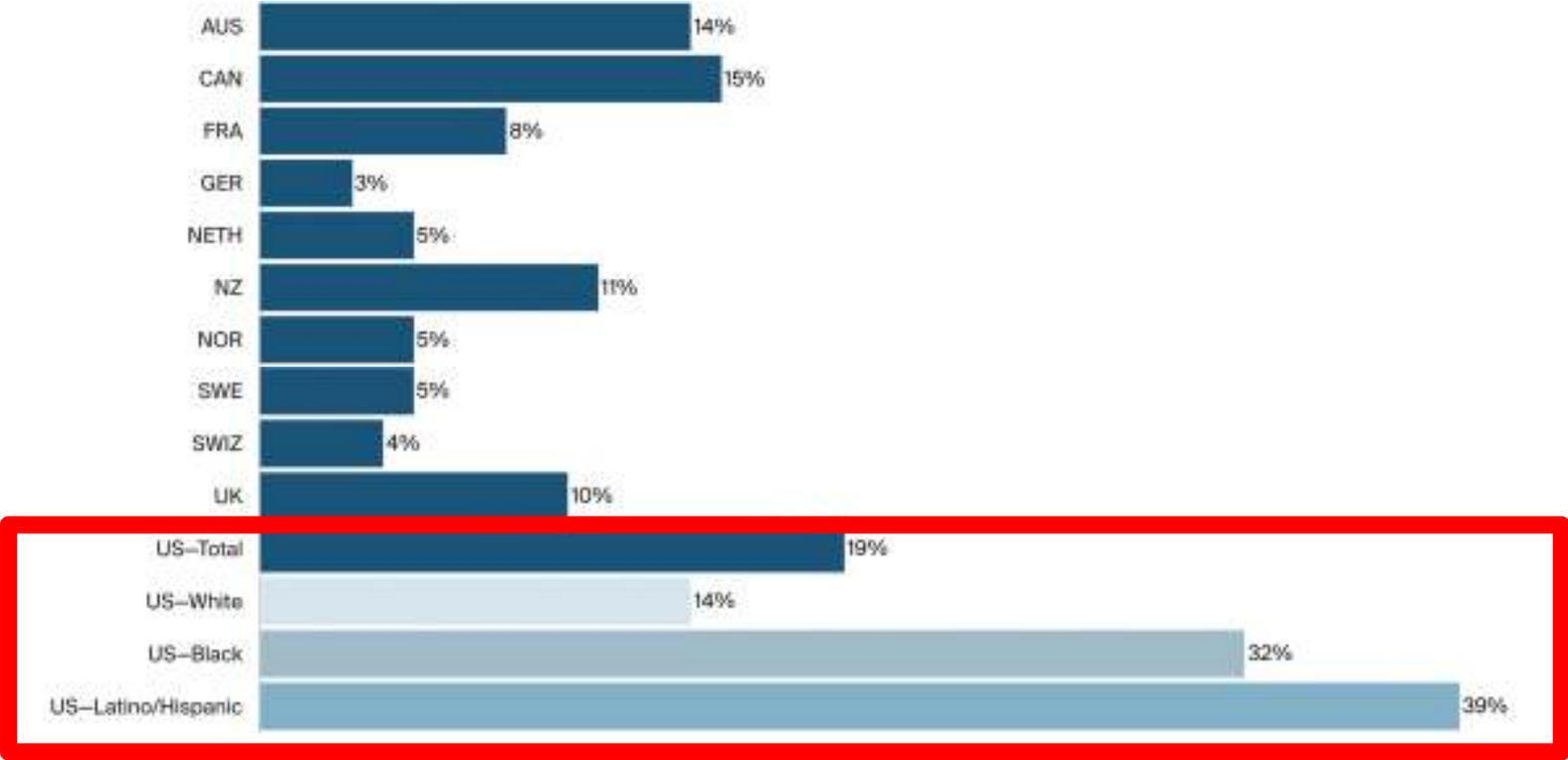
Wu B. (2020) *Glob health Res Policy*. 5:27;

Social Isolation and Loneliness in Older Adults: Opportunities for the Health Care System (2020)

Discrimination

- Ageism: “stereotypes, prejudice and/or discriminatory actions or practices against older persons that are based on their chronological age or on the perception that the person is ‘old’”
- Negative generalizations: frailty, averse to change, unproductive, in need of protection, costly health and care services
 - During the pandemic, hate speech was common; older adults blamed for lockdowns, labelled as vulnerable and burdens to society
 - E.g. telemedicine increased without attention to improving digital literacy of older adults; decision such as medical care, triage, life saving treatments
- Intersectionality of ageism and sexism, systemic racism, and discrimination against LGBTQIA+ individuals, individuals with disabilities, etc.

Income Inequality



Percentage of adults age 65+ who reported either using up all or most of their savings or losing job/source of income because of the coronavirus pandemic

Income Inequality

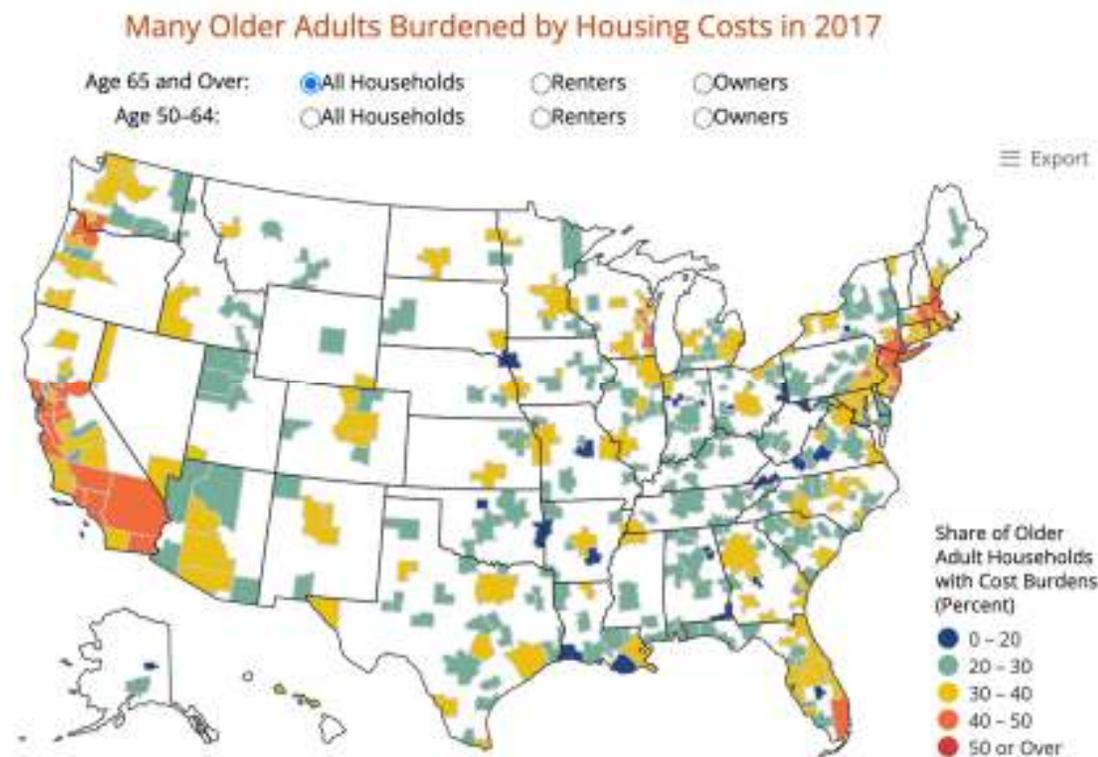
TABLE 1 | Poor and near poor older adults by race and ethnicity, US 2019.

	<99% FPL	100–199% FPL	200+ FPL
Black*			
18–64	22.2	18.8	59.0
65+	20.6	22.5	56.8
Latinx			
18–64	16.0	21.8	62.2
65+	18.9	23.4	57.7
Asian*			
18–64	11.3	10.9	77.9
65+	13.6	14.8	71.5
AI/AN^			
18–64	24.6	19.5	55.9
65+	18.3	24.4	57.3
White*			
18–64	11.4	11.3	77.3
65+	9.5	15.3	75.2

- In those under 200% of the federal poverty threshold level (FPL), the racial/ethnic inequities are substantial
 - 43.1% Black
 - 42.3% Latinx
 - 40.6% American Indian, Alaska Native
 - 28.5% Asian
 - 24.8% non-Latinx White

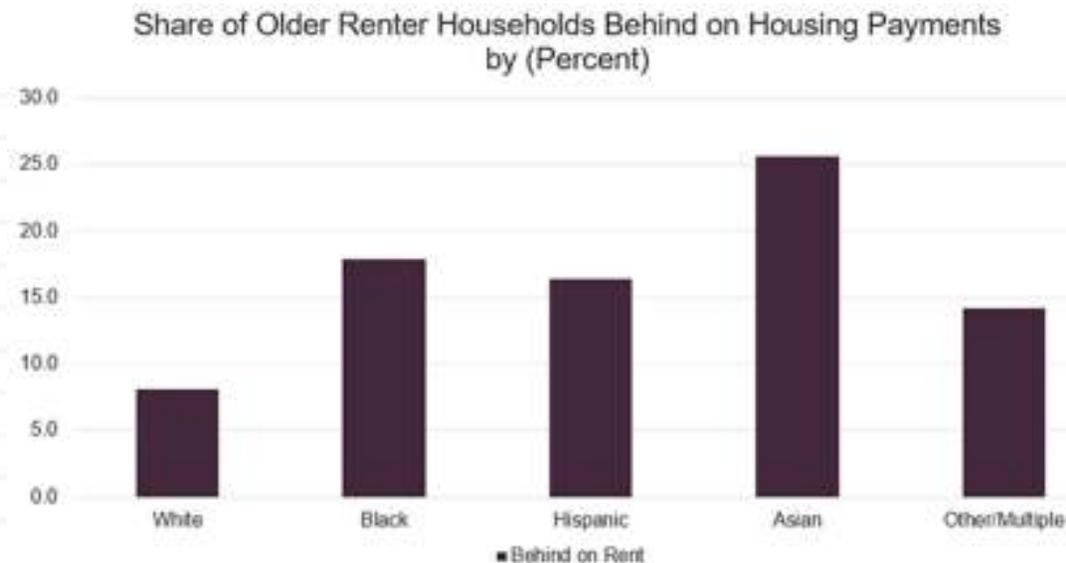
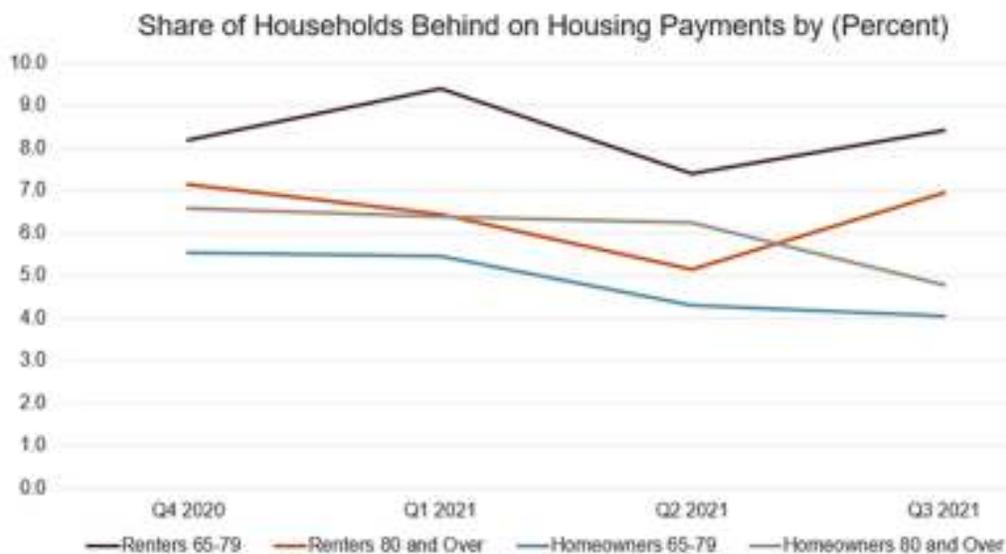
Housing Inequality

- 65 and older heads of households grew from 27 to 31 million between 2012 and 2017
- In 2017, 10 million older adults faced housing cost burdens
- Housing instability in older adults has grown since the pandemic
- White-minority gaps in homeownership has expanded



Housing Inequality

- The US Census Bureau’s Household Pulse Survey (HPS) of ~21,000 evaluated impact of COVID-19
- Data revealed that older racial and ethnic minority-headed households were harder hit by effects of the pandemic



Food Insecurity

- Limited access to nutritionally adequate and safe foods
- Higher prevalence in older adults, racial and ethnic minorities, persons with disabilities, low-income households, and those infected with COVID-19
- Positive association between food insecurity and chronic disease in older adults
- Higher mortality risk and shorter life spans in older adults with food-insecurity vs. food-security
- Repeated episodes of hunger increases susceptibility to infection

Food Insecurity

Table 2
Odds ratios of food insecurity on COVID-19 infection and health status among older adults, 2020 (N = 3212).

Variables	Panel A		Panel B		Panel C		Panel D	
	Self or coresident had COVID-19		Anyone knows had COVID-19		Anyone knows died from COVID-19		Poor or fair perceived health status	
	OR (95% CI)		OR (95% CI)		OR (95% CI)		OR (95% CI)	
	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted
Specification I: Food insecurity status								
Food-secure (reference)								
Food-insecure (either non-finance– –or finance-driven)	1.922** (1.262, 2.928)	1.477 (0.928, 2.350) <i>adjusted</i>	1.161 (0.976, 1.381)	1.131 (0.931, 1.374) <i>adjusted</i>	1.233* (1.003, 1.515)	1.105 (0.876, 1.394) <i>adjusted</i>	1.969*** (1.649, 2.352)	1.507*** (1.235, 1.840) <i>adjusted</i>
Covariates								
Intercept	0.028***	0.018***	0.580***	0.017***	0.235***	0.022***	0.348***	9.809***
–2 log likelihood	895.891	824.112	4245.534	3786.638	3190.074	2777.817	3810.897	3279.916
Nagelkerke R ²	0.011	0.056	0.001	0.111	0.002	0.125	0.024	0.186
Specification II: Food insecurity types								
Food-secure (reference)								
Finance-driven food-insecure only	1.361 (0.582, 3.184)	0.816 (0.313, 2.126)	0.878 (0.630, 1.223)	0.777 (0.536, 1.127)	0.826 (0.540, 1.262)	0.640 (0.399, 1.027)	2.254*** (1.638, 3.102)	1.342 (0.940, 1.915)
Non-finance–driven food-insecure only	2.046** (1.261, 3.321)	1.725* (1.027, 2.897)	1.309** (1.064, 1.610)	1.320* (1.054, 1.654)	1.186 (0.924, 1.521)	1.157 (0.881, 1.520)	1.645*** (1.327, 2.041)	1.488*** (1.172, 1.888)
Both non-finance– and –finance-driven food-insecure	2.452 (0.961, 6.260)	1.710 (0.630, 4.646) <i>adjusted</i>	1.055 (0.665, 1.674)	0.914 (0.550, 1.520) <i>adjusted</i>	2.745*** (1.729, 4.359)	2.143** (1.273, 3.606) <i>adjusted</i>	3.801*** (2.413, 5.986)	2.089** (1.260, 3.461) <i>adjusted</i>
Covariates								
Intercept	0.028***	0.019***	0.580***	0.019***	0.235***	0.024***	0.348***	9.806***
–2 log likelihood	894.780	821.630	4240.869	3779.417	3174.845	2764.738	3798.405	3277.713
Nagelkerke R ²	0.012	0.059	0.003	0.114	0.009	0.131	0.030	0.187

Notes. Exponentiated betas (odds ratios) and confidence intervals are presented; Covariates included health conditions, demographic, and socioeconomic characteristics for Panels A, B, and C. Panel D adjusted for demographic and socioeconomic characteristics but did not adjust for health covariates; Statistical significance denoted as ***P < 0.001; **P < 0.01; *P < 0.05. CI, confidence interval; OR, odds ratio.

Healthcare Infrastructure: Delays in Care



Percentage of older adults with ≥ 2 chronic diseases whose appointments with physicians or health care providers were canceled or postponed during the pandemic in various countries

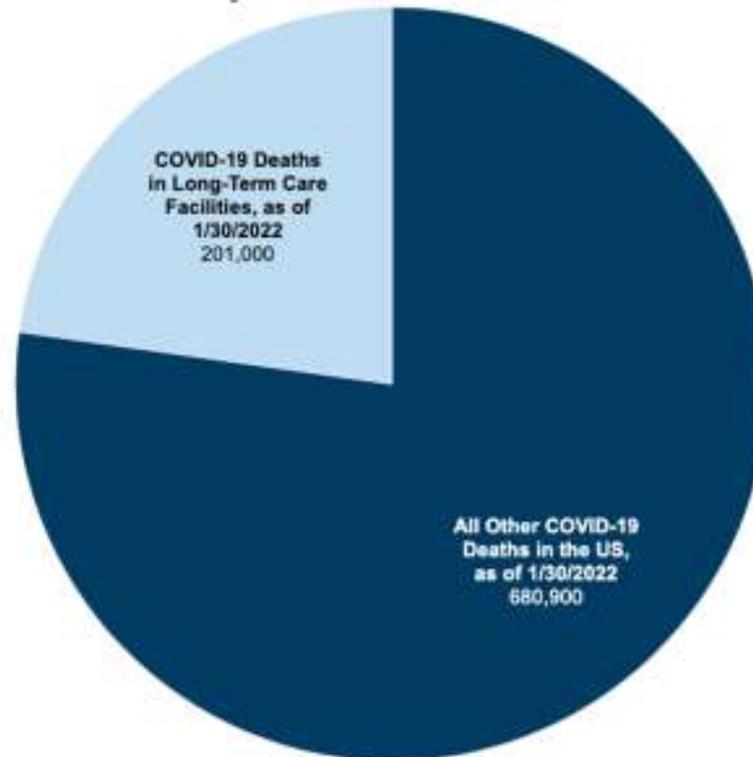
Healthcare Infrastructure: Delays in Care

TABLE 7 | Adults ages 65 and over who delayed or did not get needed medical care past 4-weeks due to COVID-19 pandemic, US.

	Black	Latinx	Asian	White
Delayed medical care	31.5	34.8	22.5	27.9
Did not get medical care	23.9	27.1	19.2	18.4
Delayed or did not get medical care (combined)	36.3	39.5	26.1	30.7

Healthcare Infrastructure: Long Term Care Facilities

- Residents and health care personnel (HCP) of care homes and institutions at highest risk of COVID-19 mortality

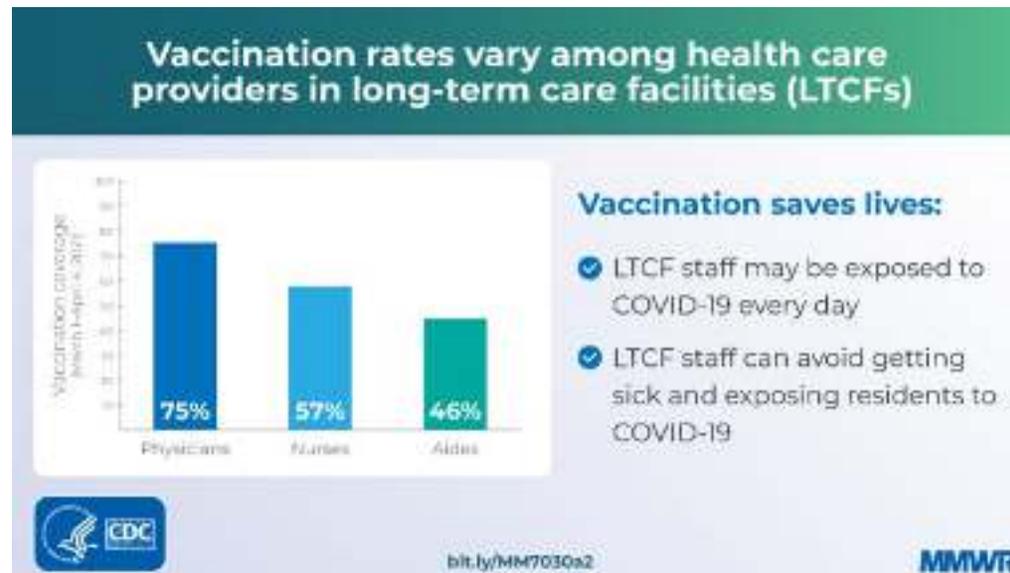


Healthcare Infrastructure: Long Term Care Facilities

- Facilities ill-equipped to handle the crisis
 - Initial lack of prioritization
 - Lack of amenities, resources (confined spaces, reduced testing capacity, lack of PPE)
 - Safety violations
- Crowding and understaffing
 - Poor worker to resident ratios
 - Patients face neglect
- Mistreatment

Healthcare Infrastructure: Long-Term Care Facilities

- 300 LTC facilities reported vaccination coverage for HCP in March 2021
- COVID-19 vaccine highest among physicians, lowest amongst aides
 - Among aides, lowest in facilities in zip codes with high levels of social vulnerability



Healthcare Infrastructure: Long-Term Care Facilities

TABLE 2 | Long-term care use by race and ethnicity, US 2015–16.

	Nursing home %	Residential care %	US Population ages 65 and over %
Latino	5.4	3.1	7.7
Non-Latinx White	75.1	81.4	78.3
Non-Latinx Black	14.3	4.1	8.7
Non-Latinx other	5.1	11.5	5.3

Healthcare Infrastructure: Pharmacist Services

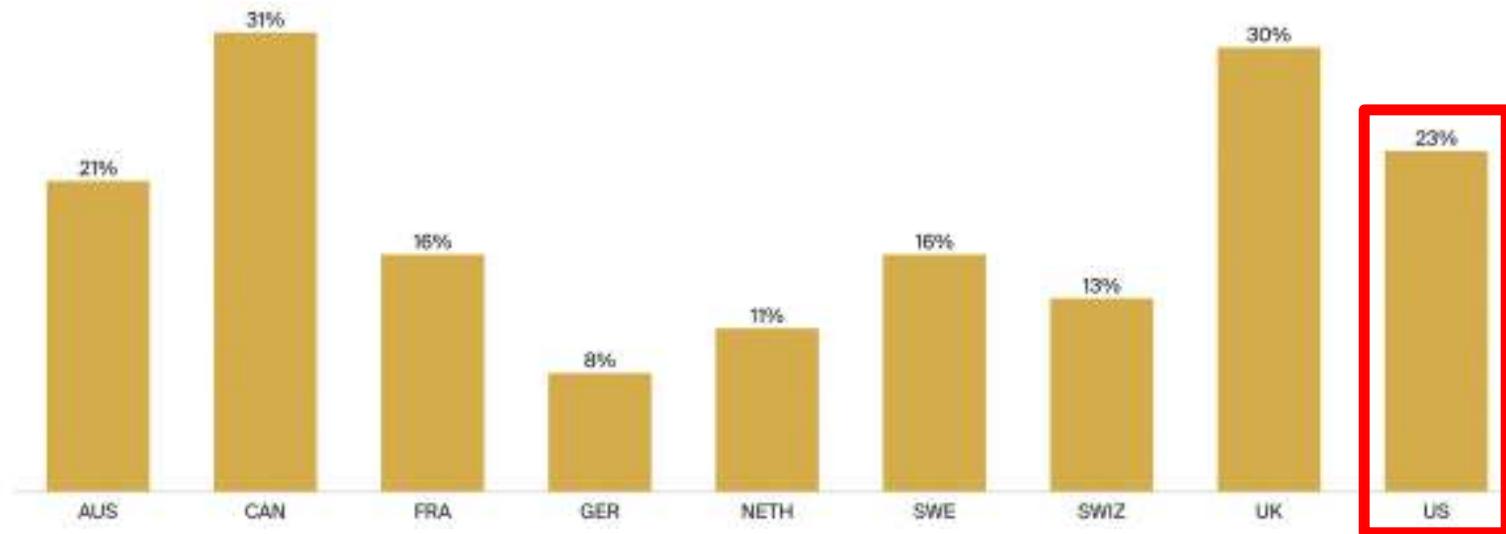
- Poor or no reimbursement for vital pharmacist services during the pandemic, e.g. testing, vaccination
- Lack of reimbursement for clinical services, e.g. optimization of therapy
- Inadequate staffing ratios – burnout, reduced hours, great resignation

Ngo M. (2022) The New York Times

Peebles A. (2022) bloomberg.com

Bookwalter CM. (2021) *US Pharm.* 46:28

Impact on Daily Living



Percentage of older adults who reported needing help with instrumental activities of daily living (housework, preparing meals, managing medications, shopping) who did not receive help as services were canceled or very limited during the pandemic

Exclusion from Clinical Trials

- Unjustified exclusion of older participants from clinical trials
- Non-representative research population
- Difficulties in applying research to older populations

Table 2
Results for each journal across the 18-year period reviewed.

	BMJ	JAMA	Lancet	NEJM	Total
RCTs included and reviewed	618	925	1213	1585	4341
RCTs specifically related to older patients (> 65years old) [*]	57 (9.2%)	23 (2.5%)	38 (3.1%)	43 (2.7%)	161 (3.7%)
RCTs with no age limit [*]	425 (68.8%)	672 (72.6%)	820 (67.6%)	1144 (72.2%)	3061 (70.5%)
RCTs with an upper age limit [*]	192 (31.2%)	252 (27.4%)	383 (32.4%)	431 (27.8%)	1258 (29.4%)
Total number of RCTs with an explained upper age limit [*]	32 (51.8%)	3 (0.3%)	28 (2.3%)	27 (1.7%)	90 (2.1%)
Total number of RCTs with unexplained upper age limit [*]	160 (25.9%)	249 (26.9%)	355 (29.3%)	404 (25.5%)	1168 (26.9%)
Correlation of proportion of RCTs with unexplained upper age limits over time (r)	-0.568	-0.342	-0.403	-0.029	-0.609
p-value	0.01	0.164	0.097	0.911	0.007

* The figure in brackets represents the value as a proportion of total RCTs reviewed.

Exclusion from Clinical Trials

Table 1. Age-Based Exclusions by Treatment Type in 847 Clinical Trials

Treatment type	No.	Age categories excluded, y						Total No. (%) ^a
		≥55	≥60	≥65	≥70	≥75	≥80	
Vaccine	18	3	4	1	0	1	2	11 (61)
Stem cells	38	0	2	3	4	8	4	21 (55)
Antiparasitic	14	0	2	2	1	1	0	6 (43)
Nutraceuticals, vitamins, minerals	53	1	3	3	4	5	4	19 (36)
Blood products	21	1	1	0	1	1	2	6 (29)
Oxygen	15	1	0	0	1	1	1	4 (27)
Antiviral	74	5	1	2	1	5	5	19 (26)
Hydroxychloroquine/ chloroquine	60	2	2	0	2	3	6	15 (25)
Multitodal	48	0	0	3	2	3	3	11 (23)
Immunomodulatory	144	1	0	4	3	7	18	33 (23)
Antiseptic	10	0	0	0	1	0	1	2 (20)
Nonpharmacologic	45	2	1	2	1	2	1	9 (20)
Anticoagulant	29	0	0	0	1	1	3	5 (17)
Convalescent plasma	63	0	2	1	2	1	4	10 (16)
Antibiotic	26	1	0	0	0	1	2	4 (15)
Antihypertensive	26	0	1	0	0	0	3	4 (15)
Other drug treatments ^b	60	0	0	3	2	1	2	7 (12)
Nitrous oxide	9	0	0	1	0	0	0	1 (11)
Anti-inflammatory	31	0	0	0	1	1	1	3 (10)
Device	32	0	0	1	0	1	1	3 (9)
Prone positioning	15	0	0	0	0	0	1	1 (7)
Steroid	16	0	0	0	0	0	1	1 (6)
Total all trials	847	17	18	25	27	43	65	195 (23)
Phase 3 total	232	3	4	5	2	9	15	38 (16)

^a Ordered by percent with age exclusion.

^b Other pharmacologic treatments indicates drug categories with fewer than 5 clinical trials.

- 847 vaccine and treatment trials for COVID-19
- 23% included an age cutoff

Digital Divide

- Telehealth is the use of two-way telecommunication technologies to provide clinical healthcare through a variety of remote methods
- Designed to increase healthcare access and reduce health disparities
- Historically, strict regulation (e.g. HIPPA) and inadequate reimbursement discouraged widespread use
- The COVID-19 pandemic prompted removal of barriers around regulation and reimbursement
- Disparities exist amongst those with limited resources, especially older adults, leading to a digital divide

Digital Divide

- COVID-19 pandemic led to a rapid adoption of telehealth
- Study using the COVID-19 supplemental survey of the National Health and Aging Trend in older adults 70+ evaluated access to information and communication technology
- Telehealth use increased; older age and income negatively associated with telehealth but no longer significant with technology-enabling factors

Table 1. Methods of Contact/Communication with Family/Friends and Usual Healthcare Provider Before and During the COVID-19 Pandemic, % (95% Confidence Interval).

	In-person Visit	Telephone Calls	Email/Texting/Social Media/ Portal Message	Video Calls/Telehealth
Family/friends^a				
Before	85.15 (83.27–86.85)	94.98 (93.63–96.06)	70.18 (68.02–72.26)	41.21 (38.75–43.72)
During	71.36 (68.97–73.64)	92.94 (91.82–93.92)	67.59 (65.40–69.70)	43.65 (40.99–46.35)
Changes between before and during ^b	$t = -15.31, p < .001$	$t = -2.96, p = .004$	$t = -4.46, p < .001$	$t = -2.73, p = .008$
Usual healthcare provider^c				
Before	87.57 (86.16–88.85)	49.01 (46.58–51.45)	19.68 (16.93–22.76)	4.59 (3.67–5.72)
During	56.64 (53.98–59.26)	61.97 (59.75–64.14)	23.55 (21.11–26.18)	21.14 (19.10–23.33)
Changes between before and during ^b	$t = -26.02, p < .001$	$t = 12.29, p < .001$	$t = 6.70, p < .001$	$t = 18.37, p < .001$

Table 4. Association of Telehealth use During COVID-19 with Predisposing, Nontechnology and Technology-Enabling Factors, and Need Factors: Logistic Regression Results.

	Telehealth Use Versus Nonuse	
	Model 1 AOR (95% CI)	Model 2 AOR (95% CI)
Age group: versus 70–74 years		
75–79	0.94 (0.68–1.35)	1.02 (0.73–1.44)
80–84	0.62 (0.43–0.89)*	0.70 (0.49–1.01)
85+	0.58 (0.42–0.80)**	0.75 (0.54–1.03)
Male versus female	1.05 (0.80–1.38)	0.97 (0.72–1.29)
Race: Versus non-Hispanic White		
Non-Hispanic Black	1.12 (0.79–1.58)	1.28 (0.92–1.80)
Hispanic	1.44 (0.77–2.70)	1.99 (1.08–3.65)*
Other	1.49 (0.86–2.55)	1.59 (0.89–2.82)
Residence in residential care facility versus in community	1.30 (0.83–2.03)	1.66 (1.02–2.69)*
Marital status: Versus married/partnered		
Divorced/separated	0.90 (0.60–1.36)	0.97 (0.66–1.42)
Widowed	0.79 (0.55–1.12)	0.81 (0.57–1.15)
Never married	1.00 (0.49–2.02)	1.04 (0.50–2.18)
Proxy response status: versus no proxy/self and proxy		
Proxy	0.96 (0.63–1.47)	1.41 (0.85–2.32)
Missing	0.50 (0.20–1.26)	0.56 (0.22–1.44)
Moved in with someone or someone moved in versus no moving	1.53 (1.17–2.00)**	1.36 (1.04–1.76)*
Income: versus up to \$29,999		
\$30,000–\$42,999	1.39 (0.93–2.08)	1.12 (0.73–1.71)
\$43,000–\$65,999	1.69 (1.13–2.53)*	1.17 (0.80–1.73)
\$66,000–\$99,999	2.01 (1.36–2.97)**	1.28 (0.86–1.91)
\$100,000+	2.47 (1.68–3.63)***	1.41 (0.95–2.10)
Diagnosis of dementia versus no diagnosis	0.71 (0.45–1.11)	0.81 (0.48–1.39)
No. of chronic medical conditions	1.16 (1.08–1.25)**	1.17 (1.08–1.26)***
No. of ADLs received help	1.00 (0.88–1.13)	1.02 (0.91–1.14)
No. of IADLs received help	1.21 (1.10–1.34)***	1.25 (1.13–1.38)***
Anxiety and/or depressive symptoms: Versus non/minimal		
Moderate	1.39 (1.07–1.82)*	1.33 (1.02–1.74)*
Severe	1.15 (0.63–2.10)	1.08 (0.61–1.91)
Not ascertained		
Self, household member, facility resident/staff had COVID-19 versus no COVID-19	1.24 (0.79–1.94)	1.19 (0.73–1.94)
Had cell phone versus no cell phone		1.15 (0.62–2.14)
Had computer versus no computer		1.58 (1.11–2.25)*
Had tablet versus no tablet		1.50 (1.09–2.06)*
Online use versus no use		1.89 (1.35–2.64)***
Learned new technology/program to go online during COVID-19		1.73 (1.32–2.28)***
Model statistics	N = 3257; design df = 56; F (26, 31) = 5.89; p < .001	N = 3257; design df = 56; F (31,26) = 10.37; p < .001

Note. AOR = adjusted odds ratios; CI = confidence intervals; ADL = activities of daily living; IADL = instrumental activities of daily living.
*p < .05; **p < .01; ***p < .001.

Model 2:
technology
enabling factors
(ICT device
ownership, prior
online
experience, and
technology
learning)

Learner Assessment Question 2

Which of the following is true regarding barriers that older adults have faced during the COVID-19 pandemic?

- A. The COVID-19 pandemic has increased food and income insecurity but not housing instability
- B. Delays in care was initially a barrier but implementation of telemedicine addressed delays in care
- C. Older adults were included in higher proportions in COVID-19 related clinical trials, leading to overrepresentation in studies
- D. Older adults faced social isolation increasing the risk of mental and physical health concerns

Strategies

Finding a Balance

- Set realistic expectations
- Start slow, go slow – understand limitations, work towards goals
- Reestablish routines - social interactions, activities, etc.
 - Consider activities that promote health
- Establish optimal geriatric-focused care – physicians, social workers, pharmacists



Social Isolation and Mental Health

- Increase culturally and linguistically accessible mental health services
- Fund delivery of social work and case management services
- Support community-based programs for older adults with cognitive decline
- Increase opportunities for social connection, physical activities, hobbies
- Increase access to health care providers



Discrimination

- Policies and laws that address ageism, and intersectional discrimination
- Training of health care workers and communities of the importance of care and protections for older adults
- Grow workforce specializing in aging
 - Student pharmacist and pharmacist training opportunities, board certification

Income, Housing and Food Inequality/Insecurity

- **Income:**
 - Programs to assist, including enrollment into benefits programs, financial counseling
 - Subsidized or cost-free services such (e.g. internet services) for older adults
- **Housing**
 - Policies and programming to address housing inequality
 - Preserve, increase affordable, accessible housing for low-income older adults
 - Rental assistance to reduce rent burdens and prevent homelessness
- **Food**
 - Funding for food delivery
 - Equitable distribution across neighborhoods
 - Transportation alternatives for community dwelling older adults

Buffel T, et al. (2021) *Urban Studies*

MacGuire FA. (2020) *Frontiers in Public Health*. 8:1

Karliner LS, et al. Center for Aging in Diverse Communities and the Multiethnic Health Equity Research Center, UCSF. March 2021.

<https://justiceinaging.org/>

Healthcare Infrastructure

Adequate resources

Timely delivery of care

Worker satisfaction



Representative trial participants

Optimal utilization of pharmacists

Impact on Daily Living

- Policies that help improve activities of daily living for older adults
 - E.g. special provisions for older adults
- Pharmacy and healthcare services that account for needs of older patients
- Increase involvement by communities, neighborhood and home associations, families

Exclusion from Clinical Trials

- Minimize exclusion based on age and stable comorbidities
- Address barriers to participation by older adults
- Train staff, develop alternates to internet-based participation
- Involve geriatric specialists in study design and training
- Ensure equitable access to new therapies, vaccines, etc.

Digital Divide

- Community-based technology training and support
- Universal internet access
- Public-private partnerships for device provision



Learner Assessment Question 1

Q. Which of the following is false?

- A. Additional services will not address social isolation that older face
- B. Optimal utilization of pharmacist services may address some of the barriers that older adults face
- C. Clinical trials could benefit from inclusion of geriatric specialists
- D. Training and support may help bridge the digital divide

Summary

- COVID-19 disproportionately impacted older adults, especially those from racial/ethnic minoritized backgrounds
 - Older adults may present with symptoms of COVID-19 that are 'atypical'
- During the pandemic, older adults faced several barriers
 - Difficulty finding a balance, social isolation, discrimination, income inequality, housing inequality, ramifications of poor healthcare infrastructure, negative impact on daily living, lack of clinical data and a digital divide
- Important to address barriers that older adults face through policy changes, services, education, etc.

Questions??

An Overview of Geriatric considerations in COVID-19

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