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Coronavirus Disease 2019



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KEYWORDS

- COVID-19 • Elderly • Nursing homes • Comorbidities • Telemedicine • Ageism
- Racism

KEY POINTS

- COVID-19 is highly pathogenic in older populations.
- Ageism and systemic racism have led to health care system failures, increase in risk of infection, and poor outcomes.
- Technology, maintenance of infection-control protocols, and home-based primary care can improve overall health care for older adults and better prepare for future disasters.

The novel coronavirus (COVID-19) outbreak in 2019 and subsequent pandemic have led to high morbidity and mortality rates, especially in the aging population, which accounts for 80% of all COVID deaths. Men have higher COVID-19 death rates, but women comprise the majority population older than 65 years, as well as the majority of caregivers.¹ Thus, COVID-19 is an urgent issue in older women's health.

In this article, the authors review manifestations of COVID-19 in older adults, normal physiologic changes and frequent comorbidities of aging that increase pathogenicity, factors contributing to overwhelming viral spread among seniors, negative effects on health and well-being resulting from measures to control the virus, and health-system improvements necessary to protect and care for this vulnerable population.

CASE 1

Mary Smith, age 63 years, is a Licensed Practical Nurse in an urban nursing home's (NH) dementia unit. COVID-19 struck in mid-March 2020, initially overwhelming infection-control protocols, personal protective equipment (PPE) supplies, testing capabilities, and staff rosters. Outbreak control was particularly difficult because cognitively impaired residents could not comply with mask wearing or physical distancing

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and frequently breached the isolation barrier. Two-thirds of the 43 unit's residents had confirmed COVID-19, 18 died, and ten survived. Others likely had asymptomatic, but unconfirmed, infections. Employees, including Ms Smith also became ill or needed to care for family members.

COVID-19 exacted a great emotional toll. Residents no longer recognized staff through PPE that blocked smiles and muffled voices, and recreational therapy was reduced to radios and coloring books. Certified nursing assistants (CNAs) and nurses curtailed nonessential tasks, resulting in depression and loneliness in many residents. Workdays were physically demanding and disheartening. A refrigerator truck in the parking lot served for months as the NH's morgue and a constant reminder of the virus's wrath. Ms Smith and colleagues mourned residents they had known for years.

Infection rates declined in late spring. By July, the refrigerator truck was gone, and the NH was COVID-19-free. Residents and staff are regularly tested. Employees are encouraged to work only at one facility. Infection-control protocols are followed, and adequate PPE dispensed. Recreation and other therapy services are at full capacity. There are even limited outdoor family visits.

Ms Smith feels the NH is better prepared for a second wave and is hopeful for the vaccine.

CASE 2

Sarah Jones and Miriam Brown, aged 86 and 85 years, respectively, are sisters whose families share a house—Sarah upstairs with her husband Abe; Miriam downstairs with husband Bob. Sarah is a breast cancer survivor. Both sisters have well-controlled hypertension and diabetes. They both function independently in the community, although Sarah's daughter Susan helps with transportation and shopping. Abe has advanced dementia and requires home-attendant services. Bob has mild cognitive impairment.

Through the first wave of the pandemic, the sisters kept the virus at bay. In November, one of Abe's home-attendants developed COVID-19. Abe became ill, was hospitalized, and died 3 days later. Sarah, Miriam, Bob, and Susan all tested positive but had mild symptoms. Susan is caring for the sisters and Bob. Everyone is sad, overwhelmed, and wishing people in the community had followed safety protocols more closely.

CASE 3

Carol Adams is a retired high school teacher who recently celebrated her 100th birthday. She never married but had several devoted former students including Dr Sanders, a physician, who became her health care proxy, and many dear friends in her building and church. Her medical problems include osteoporosis, arthritis, and unsteady gait. With increasing frailty, she needed a home-attendant for housekeeping and shopping, but she had no cognitive impairment. She managed her finances, medications, medical visits, and cooking independently. In January 2020, she had a mild respiratory infection but was clinically stable during a telemedicine visit in March.

In early April, her aide found Ms Adams with slurred speech and left-sided weakness. Afraid of COVID-19, Ms Adams refused to go to the emergency department (ED), and Dr Sanders supported that decision. Her home care hours were increased, and Ms Adams gradually recovered from her stroke. Seven of her closest friends, however, succumbed to COVID-19, as did several members of her congregation, all younger than she. Increased frailty and fear of infection now discourage Ms Adams from leaving her apartment. She feels fortunate to have enrolled in a program that

provides primary care at home and is grateful for telephonic bereavement counseling and the support of surviving friends and former students. But the losses from the pandemic have left a hole in her heart that she doubts will ever heal.

INTRODUCTION

Beginning in late 2019, a cluster of infections by a novel coronavirus began in Wuhan, China, and quickly spread to other countries throughout the world. Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) was the cause of the infection. In February 2020, the World Health Organization designated the disease as COVID-19, or coronavirus disease 2019.

Presentation

Most infected people experience mild to moderate respiratory illness and recover without special treatment. The elderly, and those with underlying comorbid conditions such as diabetes mellitus, hypertension, cardiovascular disease, respiratory illness, and chronic kidney disease, are more likely to develop serious disease. The case fatality rate in adults older than 80 years, which constitutes nearly half of NH residents, is approximately 15%.^{2,3} Symptoms are nonspecific and vary tremendously.^{2,4} Elderly patients can have present with milder or atypical symptoms, but nevertheless be more severely ill than younger patients.⁵ A breakdown of symptoms of COVID-19 by severity and body system is presented in **Table 1**. Some people in all age-groups are asymptomatic. Presymptomatic and asymptomatic transmission of COVID-19 likely contributed to high infection rates in NHs.

Diagnosis

To date, there are two tests for active infection, molecular and antigen, and an antibody test for past infection. These tests are discussed in **Table 2**.

Common laboratory findings include lymphopenia, occasional thrombocytopenia, elevated C-reactive protein, and erythrocyte sedimentation rate. Specific organ damage may also be indicated in results because of the ability of COVID-19 to infect multiple organs; however, findings largely are nonspecific.² Radiographic findings can be highly variable, with typical ground-glass opacities and patchy infiltrates as seen in **Fig. 1** absent in roughly 33% of patients upon hospital admission.^{2,14-16}

Pathophysiology

SARS-CoV-2 infects the host by binding to ciliated secretory cells in the nasal epithelium via angiotensin-converting enzyme (ACE-2). Host transmembrane protease serine type 2 (TMPRSS2) then primes the viral spike protein, allowing entry into the host cell.¹⁷ Viral replication causes involvement of the remainder of the respiratory tract. Roughly 80% of patients clear the infection in 10 to 14 days with mild symptoms. However, as the disease progresses to the lower airways via the invasion of type II pneumocytes in the alveolar epithelium, where ACE-2 receptors are in high concentration, some people develop more serious symptoms. Release of inflammatory mediators including interleukin (IL)-1, IL-6, tumor necrosis factor α , and interferon λ , causes a cytokine storm. The immune system tries to limit lung destruction by sequestering the immune reaction and attempting to clear the virus as it continues to replicate and infect healthy lung tissue. The resulting cytotoxicity and destruction of both type I and II pneumocytes cause lung injury, acute respiratory distress syndrome, and respiratory failure.^{17,18}

Table 1		
Symptoms and clinical manifestations		
System	Common Symptoms	Less Common or Severe Symptoms
Systemic ^{2,6}	Fever Fatigue Myalgia/arthralgia Pharyngitis Anorexia	Rhabdomyolysis Septic shock Multiorgan failure
Pulmonary ^{2,6}	Cough Dyspnea Chest tightness Tachypnea Sputum production	Hemoptysis Pneumonia ARDS
Cardiovascular ^{6,7}	Tachycardia Arrhythmia Acute myocardial injury with elevated troponin	Myocardial infarction Cardiomyopathy Pericarditis Myocarditis/heart failure Pulmonary embolism
Neurologic ⁸⁻¹¹	Anosmia/Ageusia Headache Dizziness Delirium Sleep disturbance Depression	Encephalitis Seizures Cerebral infarction Meningitis Guillain-Barré syndrome Miller Fisher syndrome Isolated cranial nerve palsies Acute hemorrhagic necrotizing encephalopathy Myelitis Autoimmune myopathy
Renal ⁶	Acute renal failure	
Gastrointestinal ^{2,6,12}	Diarrhea Nausea/vomiting Hepatic injury	Gastrointestinal bleeding
Hematologic ⁶	Lymphopenia Thrombosis	Disseminated intravascular coagulation
Dermatologic ¹³	Acral lesions (pseudo-chilblains, "COVID hands and toes") Rash (erythematous or vesicular) Urticaria	

Abbreviation: ARDS, acute respiratory distress syndrome.

Symptoms not specific to age. Elderly, and those with multiple comorbidities, more likely to have severe symptoms.

Through ACE-2 receptors, SARS-CoV-2 infects other host cells including enterocytes in the small intestine, arterial and venous endothelial cells, and cortical neurons and glia,¹⁷ leading to the broad range of presenting symptoms and the potential for multiorgan failure (see [Table 1](#)).

One explanation for heightened susceptibility to severe disease among older adults is that ACE-2 receptor concentrations appear to increase with age. Older men have more ACE-2 receptors and TMPRSS2, possibly related to testosterone levels, while the number and function of innate immune cells are greater in older women. This

Table 2 Testing			
	Molecular Test	Antigen Test	Antibody Test
Names	Gold standard test Diagnostic test NAAT RT-PCR	“Rapid” test Diagnostic test Protein/ Immunoglobulin test	Serologic test
Collection method	Nasopharyngeal, nasal, throat swab	Nasopharyngeal, nasal swab	Blood draw
When it is used	To determine active infection. To identify those who may be contagious or a risk to others.	To quickly determine active infection. To identify those who may be contagious or a risk to others. Less expensive than molecular tests.	To identify past infection and immune response. To identify those who might be able to donate convalescent plasma.
Results processing ^a	<48 h	<30 min	<48 h
Positive result indicates ^b	Active infection	Active infection	Past infection
Negative result indicates ^b	No active infection at time of sample collection	Viral proteins not detected. Does not rule out active infection. If concern for active infection, molecular test administration is recommended for confirmation.	No evidence of past infection. Does not rule out active infection.

Abbreviations NAAT, nucleic acid amplification test; RT-PCR, reverse transcriptase polymerase chain reaction.

^a Times vary by manufacturer institution and test load burden.

^b Sensitivity and specificity of test vary by manufacturer and trial data between 61.7% and 93.3% and 84.2% to 100%, respectively. Results affected by administration method.

Data from Weissleder R. et al. Covid-19 Diagnostics in Context (V1.50 ed., Rep.). MGH Center for Systems Biology. <https://csb.mgh.harvard.edu/covid>. Accessed November 19, 2020; and Wiersinga WJ, Rhodes A, Cheng AC, et al. Pathophysiology, Transmission, Diagnosis, and Treatment of Coronavirus Disease 2019 (COVID-19): A Review. *JAMA*. 2020;324(8):782-793.

may contribute to the higher morbidity and mortality among older men than older women, as noted in a European study.¹ There also appear to be gender differences in the effect of COVID-19 treatments. For instance, women have increased risk of QT interval prolongation on electrocardiogram and *torsades de pointes*.^{1,17}

Comorbidities and Frailty

The presence of multiple comorbidities in older people increases both morbidity and mortality from COVID-19. **Table 3**, adapted from Ejaz and colleagues,¹⁹ depicts the mechanisms by which SARS-CoV-2 causes symptoms in people with various comorbidities. Physical and cognitive functions, which are included in frailty indices, also contribute to outcomes from COVID-19 infection. One study found a direct correlation between higher Clinical Frailty Score and mortality.²⁰

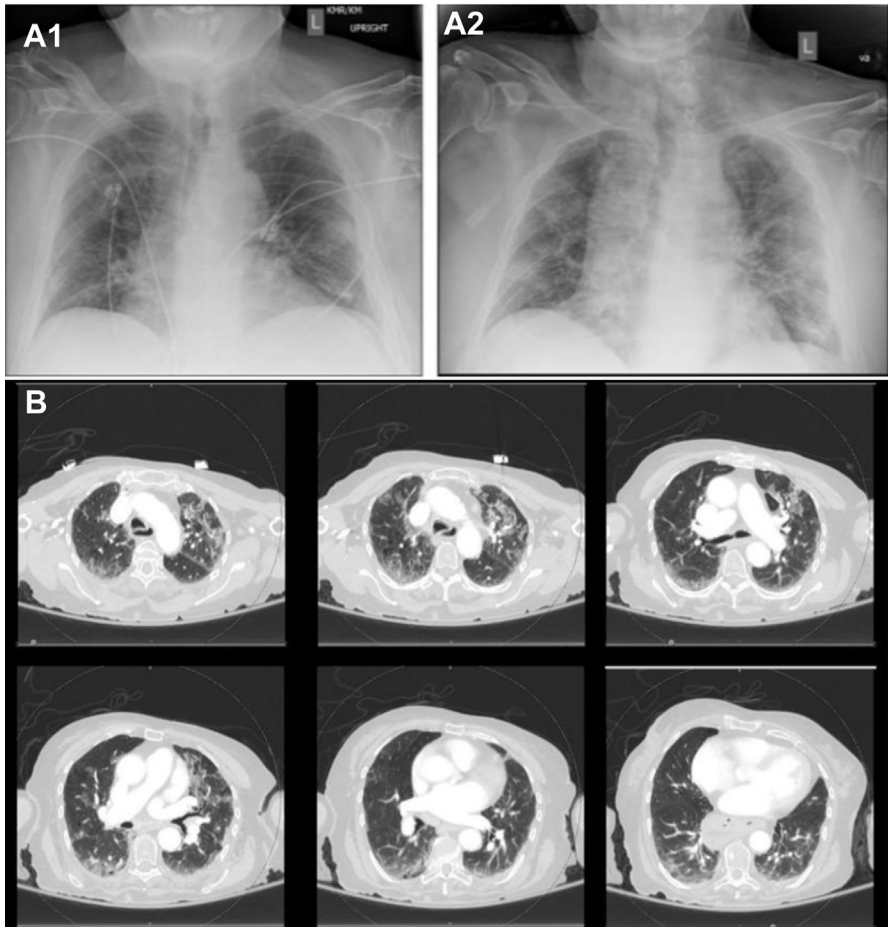


Fig. 1. Radiological Identification. (A) [1] CXR at admission, and [2] at 36 hours, shows progression of pulmonary findings. (B) CT scan demonstrates mild-moderate ground-glass opacities favoring the periphery. (Modified from Shea H, Holinski J, Benedetti R, et al. Mechanical Ventilation for COVID-19. <https://courses.edx.org/courses/course-v1:HarvardX+COV19x+1T2020/course/>. Published April 13, 2020. Accessed November 30, 2020.)

Health System and Societal Factors

Socioeconomic factors, including race and ethnicity, influence risk and severity of COVID-19. Blacks, Hispanic/Latinx, and Native Americans have been disproportionately impacted by COVID-19. The CDC reported Blacks are 1.4 times more likely to contract COVID-19 than their White counterparts but make up only 13% of the United States (US) population. Hispanic/Latinx and Native Americans are both 1.7 and 1.8 times more likely to contract the disease. **Fig. 2** represents a direct correlation of race and age to incidence of COVID-19 infection, hospitalizations, and mortality.²¹

Societal factors have also contributed to gender differences in infection rates and disease severity. In many countries, men are more likely to smoke and drink alcohol, both risk factors for comorbidities. Women are more likely to be caregivers, including frontline and essential workers.¹ In the US, a disproportionate number of people whose livelihoods place them at higher risk for COVID-19 exposure are Black and

Comorbidity	Mechanism/Pathophysiology	Symptoms
Hypertension	Upregulation of ACE-2 expression	Severe hypertension Pneumonia-like symptoms
Cardiovascular disease	Impaired immune system	Myocardial injury/infarction
Chronic obstructive pulmonary disease	Upregulation of ACE-2	Hypoxemia
Asthma	Delayed innate immune response	Chronic respiratory diseases Pneumonia-like symptoms
Diabetes	Increased ACE-2 expression Impaired T-cell function	Pneumonia-like symptoms
Obesity	High levels of cytokines, adipokines, interferons	Chronic low-grade abdominal inflammation extending to lungs.
Human Immunodeficiency Virus	Antiretroviral therapy and impaired immune system increased ACE-2 expression	Pneumonia-like symptoms Jaundice
Malignancy	Impaired immune system	ARDS
Liver disease	Increased hepatic ACE-2 expression	Elevated serum aminotransferases
Renal disease	Increased renal ACE-2 expression	Acute kidney injury
Advancing age	Weakening immune system Mechanism of comorbidities	Reflects comorbidities

Adapted from Ejaz H, Alsrhani A, Zafar A, et al. COVID-19 and comorbidities: Deleterious impact on infected patients. *J Infect Public Health*. 2020;13(12):1833-1839.; with permission.

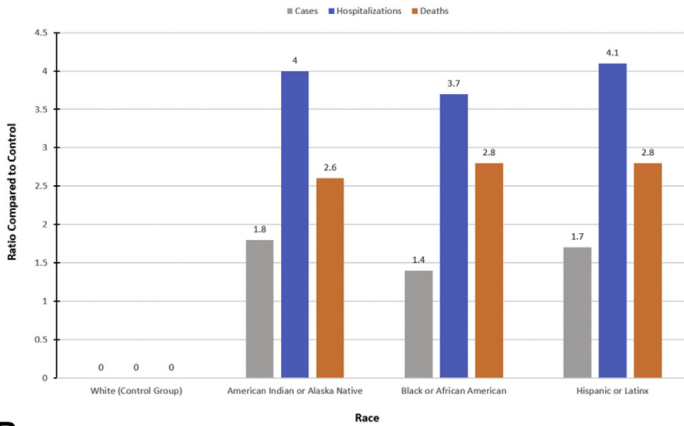
Hispanic/Latinx women.²¹ Generally, women have less access to health care and are at greater risk of losing financial stability because of the pandemic. They are also more likely to experience domestic abuse and depression stemming from social isolation.²²

The devastating impact of COVID-19 on older adults requiring long-term care—in the community and residential facilities such as NHs—cannot be explained solely by physiologic changes of aging, multiple comorbidities, or even increased exposure during personal care. The health care system failed to keep the virus out of NHs, to contain its spread once inside, and to provide appropriate care for those who became ill. Proximate causes include lack of effective infection control protocols and inadequate PPE, screening, and testing.²³ At a more basic level, this “perfect storm”, as described by Ouslander and Grabowski, stems from society’s wanton disregard for its older citizens and those who care for them.²⁴ Long-term care has too long been undervalued, underfunded, and highly segregated. Low pay and limited sick leave, especially for CNAs and home aides, result in employees’ having multiple jobs and increasing risk of interfacility viral spread.²⁵ The pandemic has heightened racial and economic disparities in care.^{22,26} NHs with greater crowding and caring for predominantly Medicaid or racial and ethnic minority residents had higher infection rates, while those with higher nurse staffing ratios and better quality ratings provided potential for better outbreak control.^{27,28}

COLLATERAL DAMAGE

Besides direct mortality and morbidity, the COVID-19 pandemic has had many indirect effects including delayed diagnosis and treatment of life-threatening conditions,

A COVID-19 Cases, Hospitalization, Deaths in Minority groups compared to White Counterpart



B COVID-19 Hospitalizations and Death rates by age when compared to 18-29 year olds

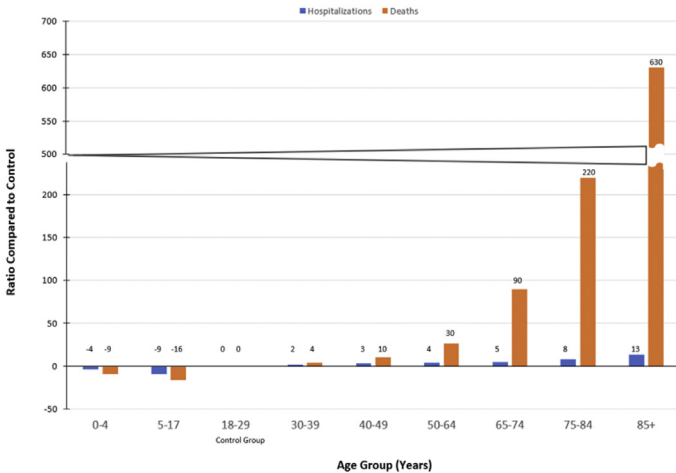


Fig. 2. Effects of COVID-19 on Minority and Different Age Groups. Numbers above the horizontal axis represent raw data as of 11/30/20. Ex. (A) 1.8 times more cases of COVID-19 in American Indian/Alaskan Natives than White counterparts. (B) 0- to 4-year-olds are 4 times less likely to be hospitalized than 18- to 29-year-old counterparts. (Data from Special Populations Data in the U.S. CDC and Prevention. <https://www.cdc.gov/coronavirus/2019-ncov/cases-updates/special-populations/index.html>. Accessed November 10, 2020.)

delayed health screenings, problems with medication management, increased elder abuse rates, decreased cognitive function, worsening depression, and decreased physical function and mobility.

Delayed Treatment and Screenings

Fear of infection kept many patients from timely hospital treatments and routine medical care. The decrease in ED visits for stroke, myocardial infarction, and appendicitis during the pandemic's peak was followed by an increase in presentations much later in the illness trajectory, when medical intervention is palliative

rather than curative.²⁹ Cancer treatments have been interrupted. Critical decisions about surgery, radiotherapy, and chemotherapy must consider risks of frequent office visits and hospital admission. Advance directives also need to be discussed with patients to assess treatment goals. The International Society for Geriatric Oncology advocates using geriatric assessment to aid in decision-making in older adults.³⁰

Medication Management

In the authors' clinical experience, medication management during the pandemic has been particularly challenging. Prolonged closings of many pharmacies and clinics interrupted renewal and dispensing of prescriptions, follow-up appointments, and regular laboratory tests needed to manage chronic conditions including diabetes, long-term anticoagulation, and hypertension.³¹ Telemedicine became and remains a lifeline for medication renewal and follow-up of medical conditions.³² Home-lab services are one solution, although not all insurances provide coverage. Strategies to minimize pharmacy trips include 90-day prescriptions and the use of mail-order pharmacies or home delivery from local pharmacies.

Similarly, patients who are regularly followed up by home-care nurses for medication administration may have this care delayed. Medication reconciliation may be even more challenging during care transitions. Medication adherence will also likely decline for many patients during the pandemic, possibly leading to poor health outcomes.³¹

Elder Abuse

Before the pandemic, approximately 1 in 10 people older than 60 years suffered from abuse or financial exploitation.³³ This has increased tenfold since the pandemic started.²² Elder abuse is the "intentional act or failure to act by a caregiver or another person in a relationship involving an expectation of trust that causes or creates a serious risk of harm to an older adult."³⁴ Risk of abuse increases with level of dependence. Quarantine has increased both dependence and the time older adults spend with potential abusers. Financial and emotional stresses as well as social isolation may instigate elder neglect or abuse.³³ Providers must be vigilant for signs of elder abuse and advocate for this vulnerable population.

Cognitive Function and Mental Health

In one British study, frail older adults with COVID-19 were more likely to present with delirium than nonfrail adults of the same age with odds ratios of 3.22 in the hospitalized and 2.29 in the community-based cohort.³⁵ Disease-related factors that increase delirium risk include hypoxia, electrolyte imbalances, and forced isolation for long periods away from family. Hospital-related factors include minimal direct patient care and the use of PPE, which disproportionately affects the hearing impaired.³⁰

Older adults with dementia face special challenges during the pandemic. They have difficulty accessing public health information. Many cannot remember to self-quarantine or to wear masks. Isolation may exacerbate behavioral problems in dementia patients, and the common need for outside caregivers increases risk of infection.³⁶

The pandemic has affected older adults' mental health. Social isolation can worsen symptoms in those previously diagnosed with depression. Worries about the pandemic and loss of social connections have increased the incidence of new-onset depression and anxiety. The preponderance of mortality among older adults, and the derailment of usual end-of-life, funeral, burial, and mourning processes,

increases the risk of complicated grief.³⁷ Bereavement in communities of color has been heightened by disproportionate distribution of COVID-19 deaths.³⁸

Access to mental health care and bereavement services has been limited. Even with the transition to virtual therapy, current resources have not kept up with demand. Many older adults have difficulty using these alternative services. Monitoring medications via telemedicine presents an additional challenge.³⁹

Physical Function and Mobility

Home isolation, leading to decline in daily physical activity, increases the risk of sarcopenia, multimorbidity, and mortality.⁴⁰ Increasing exercise can reverse these negative physical effects and improve mental well-being. Physicians recommend prescribing home-based resistance exercise for all older adults, with at least 150 minutes of moderate-intensity aerobic activity or 75 minutes of vigorous-intensity aerobic activity per week.⁴¹

Interruption of subcutaneous antiresorptive injections for osteoporosis could accelerate the rate of bone loss. A recent study found that even a 4-month delay in denosumab administration significantly increased vertebral fracture risk.⁴² If patients cannot self-administer the injection or arrange an in-person visit to receive it, plans should be made to switch to an oral bisphosphonate.⁴³

Osteoporotic fractures are an example of increased indirect risks of COVID-19 for older adults. Deconditioning during the pandemic leads to increased falls and fractures. The risk of falling and potential mortality is increased further if older adults become infected with COVID-19. Prompt surgical treatment is essential to preserve ambulation and independence. This might be delayed because patients may refuse necessary hospitalization for fear of contracting the virus, or patients medically optimized for surgery may have procedures postponed for active infection or awaiting COVID-19 test results.⁴³ Fall-prevention strategies during the pandemic are essential to decrease fragility fractures, as are protocols for surgery in patients with COVID-19.

WHAT MATTERS MOST: LESSONS LEARNED FROM COVID-19

Ethical Considerations

As the numbers of COVID-19 hospitalizations increase, the health care system may be overwhelmed, leading to the rationing of limited resources. Age has been reportedly used as a cutoff for denying admission to intensive care and mechanical ventilation, prioritizing this life-saving equipment for younger patients.⁴⁴ Advance-care planning should be addressed and documented properly. Care must be taken to distribute resources ethically and not exclude people from receiving potentially life-saving procedures solely based on age or predicted life expectancy.⁴⁵ Racial and ethnic minorities are particularly at risk for not receiving resources.²¹ Active efforts need to be made to ensure truly equitable distribution of all resources.

Ageism or “stereotyping, prejudice, and discrimination toward people by age,”⁴⁶ is not a new sentiment. At the peak of the pandemic, mainstream media coverage discussed the risk of COVID-19 to the elderly, changing the narrative of the virus to a *disease of the old*. Social media also perpetuated negative attitudes toward the aging population, frequently referring to the virus as the *#BoomerRemover* accompanied by ageist memes. Facebook posts or tweets implied that the lives of the elderly were less valuable than those of the younger population.⁴⁷ The overall tone toward this at-risk population was unsympathetic. Ageism has increased since the pandemic, as reflected by views that older people should be sacrificed for the good of society, and there have been reports of increased hate crimes against older adults.^{33,48}

Hope for the Future

The pandemic has expanded the use of telemedicine, increasing access to care for the geriatric population and allowing many geriatric syndromes to be identified, discussed, and managed remotely. Challenges in telemedicine include patients' lack of internet access or proficiency. The high prevalence of age-related hearing loss and cognitive impairment in this population makes working with these technologies even more difficult.³² Benefits of this new communication modality include enhanced observation and greater receptiveness to counseling. Practitioners can observe patients in their own environment instead of a health care facility, providing valuable information. Does the patient appear well-kept and healthy? Does the environment look safe? Are caregivers present and attentive? There should be a systematic approach to assessing these factors within the remote geriatric assessment. In addition, patients and caregivers may feel more comfortable addressing difficult topics in their home environment and can be counseled simultaneously.³³ Telemedicine should not replace but serve as an adjunct to the in-person visit, highlighting the need for expanded house call programs.

In December 2020, administration of two COVID-19 vaccines began in the US, bringing hope for the pandemic's end.⁴⁹ However, widespread vaccination may not be completed until late 2021. Thus, continued vigilance in maintaining infection control in health care facilities and in the community is essential to protect everyone, especially the vulnerable elderly population until herd immunity is achieved.

SUMMARY

SARS-CoV-2 has had a devastating impact on older adults. Many older survivors suffered prolonged effects on health, function, and independence. While the virus's unequal effect on the elderly can be attributed to intrinsic physiologic and health factors associated with aging, the pandemic has uncovered numerous fault lines in our health care system. Ageism and systemic racism play an outsized role in poor COVID-19 outcomes, and the pandemic has brought many health-system deficiencies, especially in NHs, into focus. Older adults have suffered disproportionately from interruptions in routine health care; social and physical isolation; increased incidence of elder abuse; difficulties obtaining food, medication, and help at home; and grief. Along with regular implementation of telemedicine visits, pharmacy medication deliveries and the resurrection of the physician house call should be considered. Now is the time to start creating better mass casualty, infection, and pandemic protocols to improve care for all of our citizens, especially the most vulnerable.

CLINICS CARE POINTS

- When considering a diagnosis of COVID-19, be aware of both typical and atypical clinical presentations.
- In order to decrease exposure to COVID-19, consider prescribing to pharmacies that deliver to patients and writing 90-day prescriptions.
- The pandemic has highlighted the need for house call programs, which would significantly benefit seniors. Physicians should advocate for expansion of such services.
- Be able to help seniors access community resources for food, finances, and social support.
- Telemedicine is a valuable adjunct tool for the evaluation and management of geriatric patients that provides a window into home environments.

- Be aware of ageist and racist biases that may place older patients at risk for being unable to access necessary medical care and other resources.

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