Years of Neglecting Young and Old: Paying the Piper during COVID-19 – A Commentary

Annie Lu Nguyen, MPH, PhD
Robert J. McDermott, PhD

Objective: In this paper, we argue that COVID-19 has demonstrated the seriousness of long-standing neglect of public education infrastructure, particularly where school health education and school-based health services are concerned, as well as having accentuated long-standing vulnerabilities among older adults. **Methods:** We examined practices about the divide between evidence-based recommendations of experts and system responses that leave a sizeable number of Americans vulnerable to the worst aspects of COVID-19. **Results:** We identify practices in schools, as well as institutions that respond to the needs of older Americans that increase general risk across generations from the effects of the COVID-19 outbreak. We also caution against making unwarranted assumptions or generalizations about older adults in and out of care settings. **Conclusion:** Authorities need to learn lessons from the present pandemic to avoid similar types of vulnerability in future public health emergencies.

Key words: COVID-19; school health; child health; health and older adults; public health crisis; pandemic
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For nearly 60 years, public health authorities have labeled the linkage of heart disease and several cancers with cigarette smoking as a public health "crisis."[1] Noted authorities also have cited obesity as "epidemic," and a "crisis" for the public health community resulting from some 3 decades of decline in both physical activity and wise nutritional choices.[2] Furthermore, numerous scientists, physicians, and organizations call the emergence of opioid use and addiction during the past decade as America's new "public health emergency"[3] and a "public health crisis."[4-7] Even in the past year the phenomenon of vaping and the skyrocketing sales of e-cigarettes have contributed to the widespread use of the term "crisis" in the public health lexicon.[8-10]

It is possible that COVID-19's emergence requires that public health officials, social scientists, elected officials, and others of influence in decision-making and policymaking reassess the definition of what constitutes a "public health crisis." Moreover, the scourge of COVID-19 has revealed the foolhardiness of years of neglecting or underfunding health education and services in schools, the fragility of America's education system, and the vulnerability of America's older adult population. In this commentary, we review the consequences of inaction by policymakers for citizens of the United States (US), despite there being a rich history of evidence-based studies, recommendations, and appeals.

SCHOOL HEALTH EDUCATION AND SERVICES

In the 1950s, the Joint Committee on Health Problems in Education of the National Education Association and American Medical Associa-

Annie Lu Nguyen, Assistant Professor, University of Southern California Keck School of Medicine, Los Angeles, CA. Robert J. McDermott, Professor of Public Health, Southern Illinois University Carbondale, Carbondale, IL.
Correspondence Dr Nguyen; annie.nguyen@med.usc.edu

tion released 3 print volumes along with numerous resolutions calling for greater attention to health education in schools, expanded efforts in health services and screening, and improvement in schools' physical and learning environments.[11] Under President Lyndon B. Johnson, the Great Society programs begun in the 1960s did usher in some major changes for education and health – the passage of several pieces of responsive legislation. Some of these included Head Start, Medicaid, the Elementary and Secondary Education Act (ESEA), the Education for All Handicapped Children Act, and the Child Nutrition Act that established the School Breakfast Program and the Nutrition Education and Training Program, thereby permanently authorizing reimbursements for school lunches served to pupils in need.[12]

In addition, Title I of the ESEA greatly increased the number of school nurses. A few years later saw the creation of school-based health centers (SBHCs) to address the healthcare of children and youth who otherwise had no access to primary care. Despite objections to SBHCs as being outside the realm of schools, a 1972 state-by-state Robert Wood Johnson Foundation survey failed to identify laws prohibiting the expanded delivery of health services in schools.[12]

The School Health Education Study (1961-1972)[13] outlined conceptual areas of focus for health education, as well as noting areas of deficit among youth in health knowledge, attitudes, and practices – resulting in a call for more and better health education in schools. Subsequent years saw the advance of further infrastructural designs for comprehensive school health programs – in 1988 (coordinated school health),[14] 1994 (full-service schools),[15] and 2014 (the Whole School, Whole Community, Whole Child framework).[16]

Where are We Today?

This rich history notwithstanding, school health advocates have realized their aspirations only partially. Whereas school-aged youth are vulnerable to COVID-19, the disease appears to be less severe in children than in older adults.[17] Handwashing, one of the first lines of defense against COVID-19, is a behavior often established during early childhood through both home-based and school-based health education; unfortunately, it is not a behavior that always persists into adolescence. Observational research of older schoolchildren from some years ago showed compliance with regular handwashing of just 50% to 60%.[18,19] One study revealed that only 58% of girls and 48% of boys in middle and high school washed their hands after using the bathroom,[18] and of those, just 33% and 8% respectively used soap.[18] Students may not wash their hands, in part, because handwashing facilities or supplies are unavailable or inconvenient at school.

Data from the 2016 School Health Policy and Practice Study (SHPPS)[20] conducted by the US Centers for Disease Control and Prevention (CDC) showed that just 55.1% of school districts nationwide required health education about infectious disease; this figure rose only slightly to 63.4% and 71.6% at the middle and high school levels respectively. The same study showed that just 33.7% of districts required each school to have a full-time school nurse.[20] Disdain for teaching about infectious disease haunts the mind at a time when youth are poised to be vectors for spreading COVID-19 among themselves and to their family members, including vulnerable older relatives.

CDC officials point out that major disease outbreaks, and their aftermath (when "normalcy" returns), may have major mental health effects for all populations;[21] additionally, children and teens may respond more strongly.[21] According to SHPPS data,[20] only 22.5% of districts have at least one SBHC that offers both primary care and counseling, psychological, or social services to students; moreover, just 16.2% of districts have a policy wherein each elementary school provides a specified ratio of counselors to students; this figure modestly rises to 16.8% for middle schools, and 19.8% for high schools. Considering that the mental health condition of some students may have been fragile even prior to COVID-19, its resultant closure of schools, and the substantial disruption of routine, it is unfathomable that just 12.3% of school districts have a policy to screen students for mental health problems.[20] Furthermore, at the elementary level, only a little more than half of school districts (56.9%) even require teaching about emotional and mental health.[20]

An expressed hope during the 2020 COVID-19

outbreak has been that a vaccine can be quickly developed and tested to halt the current scourge, and reduce it to a "blip" in the public health history annals – akin to the 3 waves of pandemic flu outbreak in 1918. An irony of the present public demand for vaccine is the unfortunate manner through which previously required, well-tested, and successful immunizations in public schools lost their mandates because of outcries about rare and unproven complications, and became replaced by opt-out provisions. Each of the 50 states has legislation requiring certain vaccines for students. However, all school immunization laws grant exemptions to children for medical reasons.[22] In addition, 45 states and the District of Columbia grant exemptions for people who have religious objections to immunizations.[22] Moreover, 15 states permit philosophical exemptions because of personal, moral, or other beliefs.[22] Whereas state-by-state laws are nuanced and to some extent, continuing to evolve, one must wonder how long the memory of COVID-19 will persist should a safe, easily disseminated, and successful vaccine emerge in the next 12 to 18 months.

We *do not* hold school authorities responsible for this lack of an optimal response to comprehensive school health program recommendations. Legislative investment in K-12 schools has undergone a dramatic decline in a number of states.[23] In some cases, states showing the deepest cuts also have cut income tax rates, thereby reducing their main revenue source for school support. Some of this decline began at the time of the 2008 recession; however, in 2015, the latest year for which comprehensive US Census Bureau spending data are available, 29 states were still providing less total school funding per student than they were in 2008.

Local school districts struggle to compensate for cuts in state funding. Declines in state allocations lead to teacher lay-offs, larger student-to-teacher ratios, and deferred replacement of instructional hardware and software. Necessary compensatory actions at the local level can become a game of "kicking the can down the road" for refurbishing antiquated technical infrastructures at a time when producing persons ready for college or the workforce who have the necessary technical and analytical skills, is increasingly important to a community for economic prosperity, and to no small extent, for national security.

A National Public Radio podcast of March 26, 2020 called the transition by teachers to teaching remotely as "the biggest distance learning experiment in history."[24] According to story editor Anya Kamenetz: "With little training and even fewer resources, in a matter of days they're shifting from a system of education that for centuries has focused on face-to-face interaction, to one that works entirely at a distance."[24] Teachers deserve our great admiration for their adaptation, despite many having never received formal training to conduct lessons in this manner, and despite the failures or complications of virtual teaching platforms that disrupt lessons or signals. Furthermore, similar to revelations we have seen in past disasters, long-standing neglect due to inadequate funding and prioritization (eg, teacher in-service training, salary structures that fail to attract a sufficient number of tech-savvy individuals, etc) has exposed inequalities in assets among schools, school districts, and individual students. More than one-half of the nation's public schoolchildren are in families considered low-income, with an estimated 12 million lacking broadband Internet access at home.[24]

OLDER ADULTS

Older Adults are More Vulnerable to COVID-19

Early COVID-19 epidemiological data from Wuhan, China suggested that older adults, particularly those with serious underlying health conditions, were at greater risk for mortality. This pattern was increasingly confirmed by case fatality data as the virus spread globally and reached pandemic proportions. Some of the earliest cases of COVID-19 in the US occurred among residents and employees at a long-term care facility in King County, Washington. Over a 3-week span, 129 cases at the facility were identified, which included 81 residents, 34 employees, and 14 visitors to the facility. Case fatality rates were 27.2% among residents and 7.1% among visitors. Notably, there were no deaths among employees, who were on average much younger than residents and their visitors, during this time period.[25] Current CDC surveillance data show that adults ages 65 or older

account for 53% of intensive care unit (ICU) admissions and 80% of deaths associated with COVID-19.[26] Data clearly shows that older adults are at greater risk for adverse outcomes from COVID-19 and that swift and clear guidelines to mitigate those risks from a population-level are needed. Unfortunately, outbreaks continue to show up among the most vulnerable older adults living in long-term are facilities. By now, most states, though not all, have instituted some iteration of "safer at home" or "shelter in place" policies and guidelines for practicing social distancing as a means of preventing or slowing the spread of COVID-19. Social distancing is an effective public health strategy that disrupts the chain of transmission of the virus from one person to another[27] and helps to flatten the epidemic curve. However, we argue that the social consequences of the COVID-19 pandemic has accentuated existing vulnerabilities among older adult populations beyond the health risks associated with COVID-19 infection and highlight some examples here.

Vulnerabilities Extend beyond Risk for Mortality

Social distancing is achieved through maintaining physical distance between individuals but runs the risk of facilitating social isolation. This can be harmful for older adults who are already at greater risk for being socially isolated;[28] moreover, feelings of loneliness may be amplified during the COVID-19 outbreak. In the absence of face-to-face social interactions, many people have turned to technological platforms to stay in touch with friends and family and to maintain socially connected to others. Social media websites, virtual meet-ups, teleconferencing modalities, and applications that facilitate virtual group activities like exercise or game playing are all different ways people are staying socially connected. Although many older adults are proficient with technology, there remains a technological divide in Internet usage. Those in the "oldest-old" age range, people with lower levels of education, and lower income levels are less likely to use the Internet;[29] therefore, the reliance on Internet-based technologies to facilitate social connections threatens to leave behind the most vulnerable.

At the same time, technological platforms provide an alternative means of social interaction but may do little to alleviate the loneliness of people who are already socially isolated and by definition, do not have many trusted others within their social networks. The term "social distancing" may in itself, create a perception that one must reamin shut in one's home and sealed off from the rest of the world. Perhaps we should be reminded that physical distancing, not social isolation, is the goal of this important public health strategy.

Food insecurity and hunger is a concern for millions of older adults.[30] Congregate meal programs, offered by local Area Agencies on Aging or other government agencies, are a way to address malnutrition and hunger among older adults while also serving as a social activity that participants can enjoy. Many congregate meals have shifted to meal delivery or pick-up programs but some meal sites have temporarily closed. In much the same way that the closure of schools has highlighted the realities of food insecurity for the millions of children who benefit from free or reduced-price meal programs, the closure of congregate meal programs and other meal programs that serve low-income older adults highlight the precariousness of food security and hunger among our most vulnerable populations.

Older adults who reside in long-term care facilities are perhaps among the most vulnerable to the dangers of COVID-19. Residents of long-term care facilities are sicker and often have serious health conditions. The CDC released guidance for infection prevention and control in long-term care facilities recommends, among other actions, limiting visitors in the facility. Many states have severely restricted visitation to these facilities in accordance with "safer at home" guidelines to protect residents, employees, and visitors. For some residents, the absence of visits from loved ones during such challenging times may exacerbate feelings of loneliness and helplessness. Loved ones provide company, emotional support, and play important roles as secondary caregivers for older adults with physical or cognitive limitations. For example, it is common for people with dementia to be disinterested in meals or forget to eat; family members might visit and spend extended amounts of time coaxing and encouraging older persons to eat. These acts of care complement the

medical care and attention provided by staff and often go a long way in helping older adults cope with their conditions and maintain optimism.

Social isolation, loneliness, food insecurity, caregiving, and the challenges facing residents in long-term care facilities are just 3 examples of how some older adults may be impacted by COVID-19 beyond the immediate concern around infection and transmission. It is worth noting that despite the population vulnerabilities highlighted by the pandemic, older adults as individuals are diverse and have many strengths and resiliencies. The public conversation and messaging around COVID-19 must not paint all older adults as frail, sick, and helpless against COVID-19 and must not promote intergenerational conflict. After all, Dr. Anthony Fauci, the leading medical expert on the federal coronavirus taskforce is 79 years old. Older adults can and are taking active measures to contribute to flattening the epidemic curve. Older generations may also offer valuable advice and wisdom on how to cope and persist through difficult times. Care must be taken not to allow concern for the real threat that COVID-19 poses to older adults to slip into assumptions and generalizations based on ageist notions. Conversations in the medical community and popular media about rationing medical care, should the need arise, prompted the reminder from White and Lo[31] that categorically excluding large groups of people from certain procedures is ethically problematic and sends a message that some people are "not worth saving."

To address the immediate needs of the older adults who are struggling, individuals and communities can contribute in whatever ways they can to reach out and provide support such as checking on neighbors, providing grocery or meal deliveries to homebound or self-isolating older adults, writing letters to long-term care facility residents, or supporting caregivers who are struggling themselves. It should be acknowledged that one of the sentiments that has emerged as a consequence of the pandemic is a recognition that we need to act together in order to care for one another and protect the most vulnerable. We hope this sense of collectivism will continue to guide public heath structural and policy solutions to mitigate the vulnerabilities that will continue to persist among some older adults past the time of the most dangerous threat of COVID-19.

IMPLICATIONS FOR HEALTH BEHAVIOR OR POLICY

Schools are in a position to influence achievement of at least 13 *Healthy People 2020* objectives about immunization and infectious diseases.[32] The World Health Organization is similarly positioned to attempt achievement of many comparable objectives on a global basis.[33] Reduction of other acute (eg, influenza A) or chronic infections (eg, hepatitis B) through immunization prior to pandemic outbreaks may lessen the risk of morbidity and mortality for youth and older adults alike. Critical, high-stakes decision-making that lacks parsimony, ignores the science or evidence base for sound actions, or becomes influenced by political posturing has no place when saving lives is the issue. Earlier mitigation to COVID-19 in the US, such as adoption of social distancing and sheltering in place practices, even in the face of resistance and pushback, may have saved lives.[34] Should COVID-19 rebound later in 2020 or thereafter or should a new pandemic arise, Americans never should forsake the tragic lessons learned in the first 4 months of 2020. We paid the piper once for our neglect. We cannot afford to do that again.

Human Subjects Approval Statement

Preparation of this commentary did not require conducting original research with human subjects; therefore, it was not subject to Institutional Review Board examination and approval.

Conflict of Interest Disclosure Statement

The authors have no conflicts of interest to declare.

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