

Duke

MARGOLIS CENTER
for Health Policy

2019-2020 Margolis Scholars

RESPOND AND REFORM: REFLECTIONS ON COVID-19

ABOUT THIS PUBLICATION

As part of its mission, the Duke-Margolis Center for Health Policy aims to educate and train the next generation of leaders who will advance health and the value of health care locally, nationally, and globally. The Margolis Scholars program combines academic and experiential training in health policy and management for exceptional students at Duke University. It uniquely brings together students from different disciplines to learn about and tackle pressing health care challenges through interdisciplinary, evidence-based approaches.

Each year the Margolis Scholars come together in the spring to organize an event focused on a critical health policy issue of their choice. With plans for the event firmly underway, the pandemic hit, centering everyone's attention on COVID-19 and upending our usual ways of gathering and learning. With their ingenuity and resolve, the Margolis Scholars quickly pivoted from their original topic – working with the Partnership for Healthy Durham to advance student and community collaboration to improve health and health care in Durham – to crafting a series of reflections on COVID-19.

The ethos of the Scholars program shines through in this collection, reflecting interdisciplinary perspectives and thought leadership on important and diverse facets and impacts of the pandemic. The topics covered include a range of issues that have arisen from, or been highlighted or exacerbated by, the COVID-19 experience to date, including food and housing insecurity, loneliness and other mental health concerns, structural racism, and inequities in access to care. Topics closely related to the pandemic response, such as telehealth, testing and tracing, supply chains, health care workforce, and public health and primary care infrastructure, are also explored. Aligned with the original event idea, the first five reflections of this collection examine the impact of the COVID-19 pandemic on Durham's top five health priorities, as determined by the community through the Partnership for Healthy Durham's 2017 Community Health Assessment. For more information on the assessment and/or the Partnership for Healthy Durham, please visit <https://healthydurham.org/>.

Collectively, the reflections critically and boldly outline key actions needed to respond to the challenges and opportunities posed by the pandemic. They also examine the short- and long-term reforms required to modify or strengthen the underlying structures, practices, and policies that aim to protect population health locally, nationally, and globally.

In closing, this collection showcases the tremendous talent, creativity, tenacity, and leadership of the Margolis Scholars. We hope readers will be both inspired and challenged to “**respond and reform**” – not only in dealing with this immediate crisis, but moving forward to reimagine and achieve a more prepared, resilient, and equitable health care system.

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COVID-19 AND ACCESS TO CARE: THE NEED FOR HEALTH REFORM IN DURHAM AND NORTH CAROLINA

BY SRAVYA DURBHA,
RACHEL HOLTZMAN,
AND CHUCK MATULA

Inequitable access to health care is one of the most acute problems of our time. Here in Durham, a 2018 study community health assessment found that 70% of residents noted access to health care and health insurance as a top health issue – and Black and Latinx Durhamites are two and seven times more likely than white residents to be uninsured, respectively. Across our state, COVID-19 is only decreasing access to care. From March 15 to April 25, nearly 340,000 North Carolinians lost their jobs, leading to record numbers of newly uninsured, low-income people who will fall into the Medicaid gap and struggle to access care.

In fact, because of increased patient volume nationwide due to COVID-19, 15 million adults in the U.S. have been denied care for themselves or a family member – and denial rates are four times higher for low-income adults (incomes at or below \$40,000) than their peers. It is clear that racism and other forms of systemic

oppression around class, immigration status, language and other markers, impacts who has access to health care, and who does not. As students of health policy, we have learned that our U.S. health care system needs meaningful reform – we spend too much, for too few people, with poorly aligned incentives that encourage low-quality and low-value services – but we now see it in a new light. The coronavirus pandemic is exacerbating deeply inequitable access to care in a time when we need equitable access more than ever.

Federal efforts to expand COVID-19 testing options for insured patients are important but not sufficient. The Families First Act and the CARES Act require private carriers to cover 100% of the cost of coronavirus testing (including diagnostic and antibody tests). However, affordable testing for the uninsured remains limited. A coronavirus test can cost up to \$229, which may represent nearly a quarter

of one's monthly income for North Carolinians in the Medicaid gap. Even for insured patients, providers can charge for coronavirus tests by billing patients directly rather than billing insurers, which could negotiate discounted fees for their members. This doesn't touch on the hefty medical bills patients might face if they do fall sick. A recent report estimated that an uninsured person hospitalized for coronavirus can expect to pay more than \$73,000 in medical bills, and another found that 14% of people with a likely case of COVID-19 will avoid care due to cost. The federal government must ensure COVID-19 testing and treatment is affordable for everyone, including people with and without insurance.

Recent federal policy increases access to telehealth for some but not all people. Understanding the important role of telehealth during the pandemic, the HHS Office of the Inspector General is allowing providers to reduce or waive cost-sharing for telehealth services used by Medicare patients. However, factors such as lack of adequate access to broadband, lack of insurance coverage, and homelessness hinder meaningful access to telehealth for some (*see Boisvert, Durbha, and Nguyen and Brown and Xie reflections*).

Research confirms that underserved populations, such as uninsured and low-income people, use telehealth services less than their peers. This is no surprise in places like Durham, where the majority of Durham Housing Authority public housing units do not provide WiFi to their

residents. Even with recent CMS guidance to expand and standardize Medicaid reimbursement for telehealth, more work is needed to ensure that underserved populations have the internet connectivity and devices necessary to utilize telehealth. Federal and state governments must align incentives and resources to this end.

The federal government must also invest in the home and community-based services workforce. As more patients become hospitalized due to COVID-19, acute care settings will become increasingly overwhelmed. While portions of the Cares Act's \$175B in relief funds are allocated to Medicare facilities, providers in rural areas, and providers in low-income areas, simply providing funds to existing facilities and providers is not enough. Many rural, low-income, or other health professional shortage areas do not have enough of an existing health care workforce to take advantage of these funds. Investments in building a more robust home and community-based services workforce – especially for vulnerable populations like the elderly and immunocompromised – is vital to ensure that people can receive care in the communities where they live.

Because of the remaining needs for access to care, Durham community-based organizations are stepping up to fill in the gaps. A few of the many examples include Project Access of Durham County, Senior Pharmacist, and Lincoln Community Health Center. In addition to its regular work connecting uninsured patients to

specialty care, [Project Access of Durham County](#) is part of a coalition working to ensure prevention, identification, and medical care for COVID-19 cases among Durhamites experiencing homelessness. Meanwhile, [Senior PharmAssist staff](#) received free masks from [Covering the Triangle](#), typed up instructions for how to wear them, and then brought the masks and instructions to the Forest at Duke to be shipped out to each of their 1,400 members so they could safely leave their homes. (Talk about a team effort!) Further, [Lincoln](#) has created a walk-up or drive-through testing site for suspected COVID-19 patients, most of whom are uninsured and pay for care on a sliding scale. These and other safety net providers around Durham are ensuring that vulnerable communities have access to the services they need.

But community and federal efforts cannot succeed alone; the North Carolina General Assembly must expand Medicaid to support North Carolinians through this crisis. Citizens in news outlets from [Asheville](#) to [Burlington](#) to [Greensboro](#) to [Robeson](#) have pleaded for state legislators to expand Medicaid in the face of the pandemic. Harvard researchers have [explained](#) how Medicaid expansion will provide needed support for health care systems and state budgets, and noted the harmful effects that 1115 waivers like the [Healthy Adult Opportunity Initiative](#) (enabling states around the country to transition towards Block Grants in Medicaid, not to be confused with North Carolina's

[Healthy Opportunities Pilots](#) meant to address Social Drivers of Health in our state), would have in these times. Meanwhile, the NC Justice Center has noted that many North Carolinians in the Medicaid gap are service workers – the very people we rely on for child care, groceries, and health care during pandemic. NC Child has [shown](#) that Medicaid coverage is important for the financial security of NC families during the pandemic, and [prior research by AAP](#) tells us that the children of parents with insurance are more likely to receive necessary pediatric care. Meanwhile, experts such as [Duke professor Don Taylor](#) and attorneys at [the National Health Law Program](#) and [the Charlotte Center for Legal Advocacy](#) have long since made the case for how [Medicaid Expansion would benefit our health and economy in NC](#) – which are needed more than ever right now. We must expand Medicaid to ensure that North Carolinians can access the care they need for us all to weather this storm together.

COVID-19 EXPOSES THE CRACKS IN OUR HOUSING SYSTEM

BY KELBY BROWN
AND JULIAN XIE

Every Sunday morning, Mike Harris* drinks his coffee from the same seat in the right corner of church. You can count on him to ask how you're doing and tell you to "stay blessed." His wife, Melanie, bounces around the refreshment table in the back room, organizing donated food from a local bakery that she picked up the night before. Their children sit among friends until the youth are dismissed. While social distancing has kept most of the family out of the pews, Mr. Harris, a church board member and custodian, still shows up to keep the old yet intimate building in order.

The Harrises never advertise that housing in Durham is unaffordable for them. Their ever-changing neighbors share their struggle of trying, and at times failing, to resist the known consequences of housing insecurity: chronic stress, mental illness, poor educational attainment, childhood behavioral problems, physical disease, shorter life expectancy – the list goes on. While no one would want to live in these toxic conditions, the adage holds true that the choices one makes are determined by the choices one has.

As such, the Harrises have been residents of the Durham Housing Authority (DHA), Durham's public housing agency, for over 12 years. After their son was rushed to the hospital for carbon monoxide poisoning a decade ago, they relocated to a different public housing facility. In March 2020, they were forced to relocate again for their own safety. Now their choices are to move into yet another facility, one they know to be even less safe than their prior home, or to cram into a one-bedroom apartment with their son and daughter-in-law. They have chosen the latter while they continue their search for better options – a search now far more challenging thanks to COVID-19.

Durham faced a housing crisis long before the pandemic reached our city's borders. On January 3rd, 2020, DHA began relocating 270 families from McDougald Terrace, Durham's largest public housing venue, after several carbon monoxide poisonings prompted inspections that revealed dangerous levels of carbon monoxide radiating from outdated appliances. Residents were displaced for four months, staying in hotels or with

family, while DHA worked to address the maintenance issues. While the agency fixed the gas leaks with pipe wrenches and sealant, DHA's executive director, Anthony Scott, knows he will need far more to repair decades' worth of damage caused by a failing support system. In an interview with a local newspaper one month into the McDougald Terrace crisis, Scott highlighted the \$57 billion in underfunding to housing authorities nationally by the US Department of Housing and Urban Development (HUD). *"So, yes, there is responsibility at a national level and then is definitely responsibility here..."* Mr. Scott said. *"So, we're trying to take care of business here."*

Co-chair of the Partnership for a Healthy Durham's (PHD) Health and Housing Committee, Caressa Harding, compares the national attention McDougald Terrace has received to that of the Tuskegee Syphilis Study. Both were simply the most publicized examples of their respective failing systems, affordable housing and biomedical research.

The root causes of Durham's housing crisis are multifaceted and interrelated. Durham's increasingly expensive housing market, caused in part by other systemic problems like gentrification and housing segregation, has resulted in 40% of Durham residents being cost burdened (i.e., paying more than 30% of their monthly wages towards rent). To pay less than 30% of monthly income for the average two-bedroom apartment in Durham, family must earn over \$20/hr for a full-time job – nearly 3 times the state's minimum

wage. The resultant financial fragility manifested as the worst eviction rate among NC's most populous counties in 2018 (1 in 278 residents) and a 25% increase in homelessness compared to NC's 11% decrease from 2011-2015. With over one million unemployment claims in the state since March 16th due to COVID-19, housing has only become more of a burden.

When one experiences homelessness, the first safety nets are emergency shelters, such as Urban Ministries of Durham. Such organizations provide valuable services, but are struggling to meet the growing levels of need in the area, especially while adhering to social distancing protocols. People who need longer-term assistance apply for public housing through DHA, but often find the conditions to be hardly livable due to the systemic problems described earlier.

Residents have the option to apply for one of DHA's 3000 housing choice vouchers (formally known as Section 8), which allow them to select their own housing and pay rent at 30% of their monthly incomes. The waitlist for vouchers is capped at 1500 and less than 50 applicants receive vouchers each month; wait times occasionally approach a decade. Even if the Harris family gets the voucher they have been patiently waiting for, they would then begin the often harder process of finding a landlord who will accept it in a housing system that incentivizes discrimination. Many Americans, just like the Harris family, fall through these cracks of our housing system.

Housing insecurity drives poor health through four primary pathways: 1) instability, whether it be chronic homelessness or frequent moves; 2) poor quality housing, with exposures to lead, mold, pest infestations, carbon monoxide, and crowding hazards; 3) lack of affordability, causing financial strain on households; and 4) environmental toxicity, stemming from proximity to busy roads, noise pollution, unkept buildings, overgrown lots, and lack of access to fresh foods and safe spaces. And the health consequences of these effects, even if experienced only in utero, are drastic. For families like the Harrises, in which the father suffers from diabetes, cardiovascular disease, and lung disease, the mother from chronic pain, and everyone else from asthma, their housing struggle only exacerbates these issues.

Housing insecurity intersects with food insecurity and chronic disease (*see Xie et al. reflection*), mental illness (see Neptune and Nguyen reflection), health inequities, and poverty (*see Holtzman, Nikpour, and Brown reflection*), and the current pandemic only complicates them. Along with making access to health care (*see Durbha, Holtzman, and Matula reflection*) more difficult, COVID-19 has disproportionately affected already disadvantaged populations like those trapped in tenuous housing circumstances.

Mr. Harris has lost three family members to the virus. While wedged eight people deep into a tiny apartment, the Harrises are alternating nights on the lone mattress while trying to follow social distancing measures.

“I can’t really put it into words,” Mr. Harris said when asked about the impact of COVID-19 on the family. “It’s been very stressful on all of us.” The Harrises have first-hand knowledge of the sinking house that is Durham’s crisis. For those of us who had only seen the cracks in the wall, COVID-19 has forced a closer inspection and, indeed, the foundation is flooding.

As health professionals, most diseases we diagnose are actually just the symptoms of larger societal ills. We treat the fallout from Durham’s housing crisis in our emergency rooms and on our operating tables with band-aid solutions. But to truly stop the bleeding, we need to address the root problem: the flooded foundation. When Durham residents identified affordable housing as the top health priority in 2017, PHD established the Health and Housing committee to coordinate the efforts of dedicated community members and organizations. Now is the time for health professionals to join this work of building a future where housing is a human right, and where families like the Harrises can expect to feel safe and secure at home.

**The names of some individuals have been changed to protect their identities.*

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COVID-19 DRIVES A VICIOUS CYCLE BETWEEN FOOD INSECURITY AND CHRONIC ILLNESS

BY JULIAN XIE, GEOFF CRISANTI, HANNAH MALIAN, AND NATALIE WICKENHEISSER

“I can’t get enough food because I’m afraid to go out.”

“With COVID-19, I’ve been having trouble getting enough food for the week.”

These are just a couple things we’ve heard from food-insecure patients in Durham. Access to nutritious food helps people stay at home safely and maintain their health. But the interplay of food insecurity and COVID-19 is a vicious cycle -one that the healthcare community needs to help break as part of the fight against this pandemic. COVID-19 not only disproportionately impacts patients with chronic disease, but also drives unemployment and poverty that will lead to more severe food insecurity. COVID-19 may lead up to 17.1 million additional Americans at risk to become food insecure and, by insecurity rate has doubled to 23%, up from 11% before the pandemic. Even more than before, people will face impossible choices between paying for food, rent, and medication. This will make

it harder for people to manage chronic disease and increase their future risk too. In 2015, 17.9% of Durham residents were food insecure. The history of segregation and economic marginalization have contributed to food desert and food swamp conditions, especially for people of color in Durham. Food insecurity is linked to many common chronic diseases, including obesity, diabetes, depression, hypertension, and heart disease. Patients with comorbidities, the most common being high blood pressure, diabetes, and cardiovascular disease, are 71% more likely to be hospitalized and 78% more likely to be in intensive care than those not having comorbidities. These impacts are even higher for people of color, who are already disproportionately affected by both chronic illnesses and COVID-19 itself. The pandemic will likely exacerbate these inequalities.

COVID-19 has also added new obstacles to food assistance. Food pantries need to find high-quality

cold storage for fresh foods, and volunteers to meet an influx of need. Many pantries have converted to a drive-through model to increase social distancing. But there are many more people whose transportation barriers and physical mobility limitations are now compounded by the fear that going on a bus could put them at risk for COVID-19 infection. Food-insecure people are also highly vulnerable to housing insecurity (*see Brown and Xie reflection*) and trouble accessing healthcare (*see Durbha, Holtzman, and Matula reflection*). This puts people at risk for even further physical, mental, and economic harm. This vicious cycle of COVID-19 and chronic disease requires us to fix the problem at its source – food security and economic inequality.

Durham's response to protect food security

The Durham County and City governments, and key food security organizations have recognized that supporting food access will help support our COVID-19 response. The County Commissioners formed the Durham Food Security Task Force under the County Emergency Operations Center. On May 12, the County Commissioners allocated \$152,000 to support End Hunger Durham, Meals on Wheels, and El Centro Hispano's food relief efforts. The Task Force offers food delivery for individuals who are in isolation for suspected or confirmed COVID-19. The Task Force created Durham FEAST (a collaboration of the DPS Foundation, Food Insight Group, and the Durham Hotel). Durham FEAST

provides meals, shelf-stable ingredients, and family-style casseroles for children and their families. This program is vital since schools are normally a key source of food, with two-thirds of Durham Public School students qualifying for free and reduced school lunches. The Task Force also works with El Centro Hispano, Lincoln Community Health Center, and other immigrant and refugee organizations to serve Durham's immigrant population, including refugees and undocumented people. This coalition is delivering food and providing translation and assistance to help people get connected to necessary services.

End Hunger Durham and the Duke Benefits Enrollment Center have delivered hot meals to over 900 seniors. Several local catering businesses have participated in this effort, including the restaurant Zweli's (who also coordinate meal relief for McDougald Terrace residents displaced by an environmental health crisis). Now that nutrition and chronic disease education must now be virtual, the Durham Innovative Nutrition Education program now sends out a recipe newsletter and plans to hold virtual cooking demonstrations.

Many of the same organizations that compose the Durham Food Security Task Force are members of Partnership for a Healthy Durham (PHD). PHD is a coalition of organizations and community members who collaborate to improve Durham's physical, mental, and social health and well-being.

The Partnership's Obesity, Diabetes and Food Access committee (ODAFa) leads a collaborative approach to improving food security, and preventing obesity and chronic illnesses. The ODAFA committee is now supporting the Food Security Task Force and also engaging in ongoing work on the Durham Community Health Assessment. This will guide the hard work and cooperation that is needed among the health care, government, community, and private sectors to build a more resilient and equal Durham food system – one that will make fewer people vulnerable to a pandemic like COVID-19.

The Root Causes Program

We also wanted to highlight the work of one of this paper's authors, Margolis Scholar Julian Xie, who leads the Root Causes Fresh Produce Program, which is currently home-delivering fresh produce to at-risk patients. Root Causes is a Duke medical student organization with collaborators from multiple health care and graduate schools, and funding from American Heart Association and Blue Cross Blue Shield Foundation of North Carolina.

Root Causes works with Farmer Foodshare and the Food Bank of Central and Eastern North Carolina to deliver locally-sourced produce and shelf-stable items. Patients are referred from the Duke Outpatient Clinic, Duke Healthy Lifestyles Clinic, and Lincoln Community Health Center. Many of these patients have multiple chronic health conditions that make them particularly vulnerable to unstable food access.

Since April 1st, Root Causes has delivered food to 160 patients and their families with biweekly deliveries, totaling over 7500 pounds of fresh fruits, vegetables, and shelf-stable foods. Based on surveys from 39 of our patients, we have heard that half of respondents have had trouble with getting adequate food in a given week. One in five have lost their jobs. Both before and during COVID-19, they report low food security.

Beyond food, Root Causes partners with the Duke Hotspotting Initiative to procure and deliver non-food essentials such as protective masks (made by Cover the Triangle), soap (made locally by Fillaree), hand sanitizer, disinfecting wipes, paper towels, and toilet paper. We have also delivered over 25 grow-it-yourself home gardening kits for pediatric patients. The kits are made of recycled wood, soil, seeds, and a colorful gardening guide in English and Spanish. We will also soon be procuring blood pressure cuffs, glucometers, pulse oximeters, and other portable medical devices to help our patients manage chronic illness at home.

One patient recently sent us a message: *"Good afternoon, I received my delivery today and I am beyond words right now!!!! Thank you so much for the masks, I am still working but I didn't get access to any. This was such a big help and the food as well."* Another said, *"We've been really enjoying all the types of produce, we've never cooked Bok Choy before but it has been fun to look up new recipes and it was delicious!"*

We encourage the health care community to get engaged in the ODAFA committee which meets on the 2nd Wednesday of the month at 9 a.m. The Task Force coordinates organizations through a weekly call, and for anyone looking to volunteer, please check out the Durham Food Security Task Force Feeding Together Portal or contact the paper's authors.

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MENTAL HEALTH DURING AND AFTER THE COVID-19 ERA

BY NATHANIEL NEPTUNE
AND ELAINE NGUYEN

Mental health issues related to the COVID-19 pandemic are continuing to spread rapidly and invisibly, similar to the coronavirus. The necessary public health measures to encourage social distancing and reduce the spread of coronavirus have led to increased social isolation. Our isolation is also mixed with overexposure to the unrelenting media coverage of the pandemic.

The combination of social isolation, information overload, and disruptions of daily life have caused increased feelings of anticipatory grief, worry, and anxiety around the nation.

Further, the increased social deprivation, unemployment rates, and economic hardship caused by the pandemic are all linked with increases in suicide rates.

Public health crises typically expose and exacerbate weaknesses in the health system, and the COVID-19 pandemic has done both for mental health support systems. Prior to the pandemic, Cigna's survey of over 10,000 adults revealed 61% of Americans reported feelings of loneliness and 24% reported their mental health as fair or poor; both are increases from prior years. Additionally, over 10 million adults

still report an unmet need for mental health care. Locally, survey data collected by the Partnership for a Healthy Durham revealed that 55% of Durham residents felt mental health should be a "top community priority," and close to 1 in 3 Durham high school students reported feelings of depression in 2017. The COVID-19 pandemic will increase the stress on our fragile mental health system while creating new challenges for a broader swath of Americans leading to a second-wave pandemic of mental health crises.

The decreased opportunities for social interaction will weaken people's protective factors against psychosocial problems. Many will look to use alcohol, illicit drugs, or other maladaptive coping techniques to escape feeling out of control, lonely, or anxious about their health and economic livelihoods. School, work, and other outings often serve as a respite from stressful or abusive home situations. Since shelter-at-home orders have been issued, countries have reported up to a 50% increase in reports of domestic violence, and child welfare experts have expressed concerns of increased child abuse and neglect.

Further, those in most need of help or with the fewest resources are suffering the most. The socio-economic needs of many adults have forced them to choose between paying bills or seeking support for their mental health needs. People without adequate internet access are unable to access virtual visits, and fewer people can pay for mental health services due to layoffs (*see Boisvert, Durbha, and Nguyen reflection*). Also, those belonging to racial, ethnic, gender, or sexual minority groups, who often face heightened barriers to care, continue to be more susceptible to poor mental health outcomes, discrimination, and a lack of access to services (*see Durbha, Holtzman, and Matula reflection*).

Our daily lives will not return to what we considered normal in the pre-COVID-19 era, but many opportunities exist to adequately address the mental health needs of the community. This point in time can be the moment of change for improved mental health services. Social distancing measures have forced clinicians and counselors to conduct virtual visits and they now have more tools available to reach patients virtually. Mental health experts should continue to capitalize on the surge in interest for telehealth and explore other avenues to conduct virtual visits, especially as a telehealth session does not have to be limited to a video conference. Other methods of communication, namely text messages, can also be used as another telehealth tool. Additionally, services such as the Crisis Text Line can provide anonymous mental health services to anyone with access

to text messaging, at any time of the day. Other virtual counseling tools, including wellness applications, social media, and telephone groups, can help provide support for coping during this crisis.

The lack of equity in the provision of mental health services, whether virtual or in-person, must not be overlooked, as those who do not have access to the internet or other telecommunication services and devices will find these services inaccessible. The social drivers of health, mental well-being, and physical health are all intertwined and should be assessed and treated in tandem. Equity-based approaches are required to ensure mental health services are universally accessible regardless of race, income, language, age, physical ability, or technical knowledge.

Additional recommendations gathered during listening sessions held by the Partnership for a Healthy Durham prior to the pandemic include creating an anti-stigma mental health campaign to encourage people to discuss their mental health concerns and offering free mental health screenings for all school children. Local community workers can be a point of contact to initiate universal screening for our vulnerable populations whom food pantries and other support organizations are already in frequent contact with. Future work should focus on developing ways to monitor the mental health of communities and the impact of COVID-19, integrating behavioral health into primary care services, and addressing the social drivers of health alongside

mental health services. North Carolina is in an advantageous position to lead the charge for change. We can address social risk factors for health by leveraging our current progress with initiatives such as the [Health Opportunities Pilots](#) to continue improving the overall health care of vulnerable populations.

The COVID-19 pandemic is a black swan event with profound mental health impacts on all of society. The detrimental effects of COVID-19 and social distancing on mental health will outlast the virus and continue to present challenges related to social distancing, adjusting to new norms, and coping with the trauma of enduring a pandemic. Now is the time for policymakers and health care organizations to focus our efforts equally on finding a cure or vaccine for COVID-19 and ensuring the mental health needs of all people are met.

If you or someone you know is in need of immediate help, please call 1-800-273-TALK (8255) any time to speak to someone and get support. Additional local resources can be found [here](#).

"OUR COMMUNITY, OUR RESPONSIBILITY": COMMUNITY EFFORTS TO NAVIGATE THE INTERSECTION OF COVID-19, POVERTY AND STRUCTURAL RACISM IN DURHAM

BY RACHEL HOLTZMAN,
JACQUELINE NIKPOUR,
AND KELBY BROWN

When COVID-19 first began to spread widely, experts held their breaths. Tweets to the tune of “the virus doesn’t care if you’re Black or white, poor or rich” came rolling in. No one knew for sure who would be most affected. As students of health policy and health equity, we held our breaths too. We hoped our racial and ethnic minority and working-class neighbors would not be disproportionately impacted, as they so often are in health care, but feared they would. As COVID-19 wreaked havoc on our communities, it has uncovered the all too familiar reality that divisions of race and class are woven into the fabric of our society.

The reality is that COVID-19 hasn’t caused new disparities – it’s only exacerbated those that already

existed. For example, while Black and Latinx people make up just 22% and 10% of the North Carolina population, they account for 36% and 23% of COVID-19-related deaths (respectively). This is partially due to occupational segregation that has resulted in nearly a quarter of Black and Latinx workers being service industry workers, compared to just 16% of white workers. Therefore, when we are told to stay safe by staying home, there’s a big racial divide in who has access to that privilege.

Furthermore, while 40% of white North Carolinians hold college degrees, only 30% of Black North Carolinians do, perpetuating the disparity in social mobility that allows one to endure economic downturns

like this. Even the Black-owned businesses in Durham, such as Beyu Cafe and Empower Dance Studio, are having to make severe reductions in hours and staffing that will make it hard for them to recover. The result of these co-occurring realities is that low-income people of color in North Carolina – and in Durham specifically – are facing increased physical risk from COVID-19, with fewer of the protections that come from steady employment and wealth. The virus may not discriminate between who it infects, but structural racism sure does.

The effects of structural racism on communities of color in Durham is nothing new. A clear example is the near erasing of the Hayti community that was once home to Durham’s thriving Black middle class and hundreds of Black-owned businesses – even praised by Dr. W.E.B. Du Bois and Booker T. Washington. This once-bustling community was decimated by the urban renewal movement in the 1960’s. Rather than routing the new NC-147 highway through any of the many predominantly white neighborhoods in Durham, the state elected that Hayti should be the scapegoat, and in the process razed nearly 200 acres in the heart of “Black Wallstreet” to the ground.

While Black community leaders voted for urban renewal because of promises from the State and Federal government about resources that would be provided to the Black community, those promises were never realized. Hayti was nearly destroyed, with most businesses going under and many families permanently displaced. The list of

minority communities in Durham that have endured through decades of racism goes on and on.

Yet in spite of, or perhaps because of, these systems of oppression, Durhamites have grown incredibly resilient. This resiliency is embodied within Hayti’s community food pantry, the nonprofit Believers United for Progress. If you were to drive to the food pantry, you might almost miss the small shop entirely. Once you arrive, though, you’d be greeted by the Director, Kasib Abdullah, a middle-aged Black man with laugh lines at the corners of his eyes. Kasib is well known in the Durham community as a leader, a friendly face, and the owner of the delicious restaurant, New Visions of Africa, out of which Believers United for Progress is run.

Unlike many businesses, Kasib’s purpose is not to make money, but to feed and engage with the community. Long before COVID-19, he and his staff served free community meals to children and families, bringing together folks of all nationalities and religions from within and beyond Hayti. Kasib also sponsors mentorship programs and the like for kids and families, as well as a community garden. These programs are taking a new shape in the face of the pandemic, but are continuing to engage and support the community.* The nonprofit’s role in Durham can even be seen on Kasib’s business card, with three pairs of brown and white hands clasped in handshakes along the side and “our community, our responsibility” stretched across the top.

“Our community, our responsibility” is a motto that holds true throughout Durham. Now, more than ever, Durahmites are building upon existing networks and creating new ones to support one another during COVID-19. At least 15 neighborhoods are now part of the Durham Mutual Aid Network, which is organizing support within and across neighborhoods using a framework of solidarity and collective liberation – the recognition that everyone’s struggles are interconnected, and thus our liberation is too. Families are building new victory gardens like that of the Inter-Faith Food Shuttle, using small spaces to harvest fresh food for folks who need it. The Durham Public Schools (DPS) Foundation has started providing thousands of meals a week to low-income families through the Durham FEAST program, after the DPS feeding program was shut down due to an employee testing positive for COVID-19 (*see Xie et al. reflection*). A group of Durham residents and organizations created The Thriving Community Fund for Durham-based minority owned businesses that demonstrate “transformational strategies to end racism and poverty.” Throughout the many pockets of Durham, residents are showing their tendency towards community-led resiliency in instances when we can’t fully rely on the government for support.

What’s happening in Durham is not unique; instead, it’s connected to a broader movement of people calling for systemic change. From Rev. Dr. William J. Barber II and the Poor People's Campaign, to the more than 200 groups that have signed onto the

NC People’s Platform for Social and Economic Survival and Beyond Us, it is clear that North Carolinians are hungry for reform. They embody a long history of progressive movements by, with, and for working class communities and communities of color, as well as people who have become newly involved in their communities in the time of the pandemic. And the need for these movements is only growing as COVID-19’s impact continues to worsen disparities of class and race.

We must collectively look back at what led us to this moment and forward to our reimagined future of interdependence and mutual flourishing. Only together will we have the power to withstand this pandemic and pave a new highway that bends towards justice.

**Believers United for Progress will be one of the distribution sites for the USDA Coronavirus Food Assistance Program, which will send bulk food to community food pantries to be redistributed to people in need of food aid over the next six months. Kasib is currently looking for volunteers to help him repackage food for around three hours a week. If you’re interested in getting involved, you can email Kasib at humanityone@believersunitedforprogress.org with the head line “Volunteering for the USDA Coronavirus Food Assistance Program.”*

LONELINESS DURING COVID-19

BY THAIN SIMON

Most will remember March 2020 as the month America shut down to flatten the curve. But it means something different to me. The week before social distancing began, my father was diagnosed with cancer. As someone living on my own, I experienced the sadness, frustration and despair of a parent's illness acutely, and alone. This experience of isolation – novel and temporary for me, but familiar and permanent for so many – moved me towards a deeper understanding of loneliness as both a personal and public health issue.

My father began chemotherapy in California on the day I attended my first virtual law school class in Durham, after Duke University closed its campus. I had wanted to go home, but the country was shutting down, flights were being cancelled, and the risk of exposure inherent in travel made such a trip – to visit a soon-to-be immunocompromised parent no less – out of the question. In the weeks that followed, my routine involved hours of Zoom lectures and daily phone calls home. As often happens with chemotherapy, my father's treatment grew more difficult with each additional round. I began listening for – and finding – signs of fatigue in my parents' voices. I internalized their weariness as if by

doing so I could carry some of their burden.

In time, I grew tired of my routine and my apartment. It took more and more effort to stay focused on my classwork, which no longer felt important. I was turning inward, preoccupied with the uncertainty ahead, shaken, frustrated and sad.

Under normal circumstances, I would have leaned on my friends for support. We'd have met for coffee, cooked meals together, shared dinner and drinks at our favorite restaurants and bars. But social distancing made the physical presence of friends impossible and I was left to process, grieve, and find the strength I needed on my own. Before I knew it, a month had passed without any experience of human presence deeper than a passing wave with my neighbors.

On Easter Sunday, more than a month into lockdown, a friend and fellow Margolis Scholar reached out to see if I wanted to go for a socially-distanced walk in Duke Forest. I had been politely declining invitations like this for weeks in an abundance of caution. But this time, for whatever reason, I relented. Fresh air and friendly company would do me some good. We walked and chatted

for two hours, keeping our distance as best we could, but trusting also in the sun and the breeze and the openness of an outdoor space.

After the walk – my first meaningful in-person human interaction in a month – I felt lighter and happier. My emotional equilibrium had been reset and renewed. If I needed any more proof that I had been deeply lonely, this was it. I'm an introvert, and I usually enjoy living alone. But choosing to be alone during certain parts of the day – solitude – is different from loneliness. The former can be energizing; the latter can be debilitating.

There is nothing unique about my situation. The coronavirus pandemic has affected everyone. Nearly two million Americans are diagnosed with cancer each year. And loneliness is a common experience: a 2019 survey found that 60% of American adults report feeling lonely. My own experience of loneliness has been mild and temporary. But there's growing recognition that social isolation is itself a serious public health issue. Research suggests that loneliness can be as harmful to health as obesity and may increase the risk of heart disease, stroke and dementia.

Loneliness sharpens the bite of life's hardships. It makes responding to inevitable experiences of suffering – like a parent's cancer diagnosis – more difficult. The people I might have leaned on for support after my father's diagnosis were all still there for me. But we couldn't get together, we couldn't meet for coffee or a

meal, and we couldn't hug. These things matter.

When we spend less time with other people, our focus shifts to ourselves – our world can't help but shrink. This shift heightens the awareness of our own problems just as it erodes our connection to the concerns of others. Even as the world battled a deadly contagion, I was concerned mostly with my own father's health. And as time went by, my attention shifted even further inwards to my own well-being and small hardships: the shortcomings of zoom lectures, the tedium of law school exams – my own petty frustrations. Time spent with others, especially in person, invites us out of ourselves. We reconnect with the world, gain perspective on our own lives, and cultivate gratitude for what we already have – all of which makes us happier. Through human connection we press pause on self-concern and grow towards the empathy needed to do meaningful work, especially in health care.

We knew this before the pandemic, but we are feeling it now, and differently. Loneliness doesn't affect everyone equally. The elderly, for example, are distinctly at risk of experiencing loneliness – just as they are at greater risk of negative outcomes from COVID-19. During this pandemic, however, social distancing has introduced scores of people like myself, otherwise fortunate to enjoy strong social support, to the loneliness of isolation. It should awaken us to the real suffering of the socially isolated and compel us to action.

Fighting loneliness requires nothing but our time and intention. Checking in on people really helps. Those who are experiencing loneliness may not reach out themselves, so be proactive. As I experienced it, a short walk with a friend can make a world of difference. And when it comes to human connection, not all interaction is created equal. In person visits are the best (when we can). After that, video calls beat phone calls, which are better than texts.

Loneliness existed before COVID-19 and it will exist after. It is emerging as a public health concern of the first order. But this is a problem we can all tackle, today, without money or training. Who in your life might be lonely? Have ten minutes to say hello?

COVID-19 AND THE RISE OF TELEHEALTH

BY SCOTT BOISVERT,
SRAVYA DURBHA,
AND ELAINE NGUYEN

With the coronavirus drastically limiting in-person contact and appointments, health care providers have turned to a new tool that may change the health care industry in the long-term: telemedicine.

Physicians are able to use an internet connection and computers, smartphones, or tablets to conduct virtual visits with their patients. An additional advantage of the telehealth visit is that it allows doctors to assess the patient's home environment and whether it may be contributing to the patient's health issue.

Acknowledging the need for telehealth visits during this time, state and federal regulators have made accommodations to increase access to this kind of care. The Centers for Medicare and Medicaid Services issued a waiver in March to expand the use of federally funded health insurance (Medicare, Medicaid, and the Children's Health Insurance Program) to pay for telehealth visits. Before this waiver, Medicare would only cover telehealth visits on a limited basis, like for patients who lived in designated rural areas and had trouble getting

to a medical facility. The Department of Health and Human Services also announced that they would relax HIPAA privacy restrictions so that health providers could use more common platforms like FaceTime and Zoom to communicate with patients. On the state level, North Carolina Medicaid similarly expanded its coverage of telehealth visits, as did Blue Cross Blue Shield of North Carolina, the state's largest insurance provider.

While the COVID-19 pandemic can be seen as the catalyst for the rise of telehealth tools and utilization, public and private sector systems must ensure that these services evolve in parallel with the U.S. health care system, which is increasingly emphasizing value-based principles. One characteristic of telehealth that appeals to many is its ability to generate cost savings, as costs related to traveling to an in-person medical visit would not be incurred. Some argue that the convenience and potential accessibility of telehealth services will lead to their overuse by providers and patients, which will increase the total cost of care. In contrast, 32 states have

enacted telehealth “parity laws”, which require insurance companies to pay health care providers for the same telehealth services that would have otherwise been covered during an in-person visit. This regulation is intended to incentivize physicians to take advantage of telehealth services over in-person services. North Carolina is one of 18 states that do not have a telehealth parity law, claiming that full parity, or equal payments, for telehealth services may undermine their cost-effectiveness due to overuse. States like North Carolina argue that, to take full advantage of the value of telehealth services, they must be reimbursed at a lower rate to reflect their value. While the U.S. struggles to resolve questions around payment for and the value of telehealth services, we also continue to face hurdles with respect to variations in telehealth insurance coverage and physician licensure requirements, as well as patient privacy and accessibility to medical data.

Furthermore, a broad and rushed expansion of telehealth may lead to disparate impacts on communities lacking sufficient internet connectivity. According to the Pew Research Center, only 73% of American households have broadband access. Broadband access is the gold-standard of internet connectivity – representing the fastest download speeds and corresponding device operability. Even more troubling is that this fundamental service is especially limited in rural communities (63%), low-income households (56% for incomes <\$30,000), and among racial minorities (61% of Hispanic adults,

66% of Black adults). Known as the “digital divide”, the widening gap in internet connectivity between underprivileged communities and wealthy, suburban communities has implications far beyond Netflix buffering times. As more fundamental services have moved online in response to COVID-19 – such as education – the detrimental impact of limited broadband access has become increasingly stark.

The digital divide presents an alarming picture of the current state of inequity in the U.S. with respect to access to internet services and telehealth. However, it is also a looming harbinger of the potential exacerbation of health inequities among underserved communities. The New York City Department of Health and Mental Hygiene found a substantially higher number of hospitalized and non-hospitalized COVID-19 cases among Black and Hispanic populations in the city. Furthermore, COVID-19 death rates among Black and Hispanic populations were 92.3 and 74.3 per 100,000 people respectively, compared to 45.2 deaths per 100,000 among white populations. Racial and ethnic minority groups are also more likely to experience inadequate economic and social infrastructure, underlying health conditions, lower access to care. Given these conditions, the populations deprived of broadband access and telehealth services may actually be at the highest risk for COVID-19.

Tying health care access to internet connectivity through the rapid adoption of telehealth measures add a further barrier to already

underserved communities.

Telehealth necessitates base levels of internet connectivity to support providing services digitally. Less connectivity may result in decreased provider flexibility in diagnosis tools (such as access to high-definition video) and treatment options (such as using internet-connected devices) – let alone the 14,551,297 Americans excluded from telehealth entirely due lack of internet access at any speed.

To overcome the digital divide in health care and expand meaningful access to telehealth for all, we propose the following recommendations:

1. Policymakers should prioritize expanding digital infrastructure as part of telehealth rollout. Absent a broader definition of health care development that includes internet infrastructure investments, deploying telehealth broadly risks leaving behind some of America's most vulnerable populations.
2. Hospitals and policymakers must work together to incorporate value-based care principles into utilization of and reimbursement for telehealth services. Although telehealth may afford considerable cost-savings, stakeholders must fully consider the costs and benefits of telehealth over in-person visits when making decisions regarding parity laws and reimbursement rates.

ENGAGING COMMUNITY MEDICAL PROVIDERS IN THE AGE OF COVID-19

BY YUN BOYLSTON

Do what you can, with what you've got, where you are.

In his autobiography, Theodore Roosevelt imparts the wisdom of Bill Widener to sum up what he considers to be one's duty in life. More than a century later, this philosophy aptly describes the outlook of U.S. health care workers born out of necessity in the age of COVID-19. Faced with a scarcity of both supplies and knowledge to fight the virus, we seem to be collectively witnessing a game of Concentration in which tile pieces are laboriously matched and removed to reveal the detailed picture underneath.

As a community physician, it's sobering to see the fragmented response at the federal and state levels, leaving community health systems and providers to face the reality that they are essentially on their own for the time-being. *Do what you can, with what you've got.* My independent medical practice has leaned into the rapid pace of change. Attending Zoom webinars with public health, medical, and business experts has become a part-time

profession. Now a few months into implementing and scaling telehealth, virtual encounters comprise over 25% of our practice's visit volume. We have also benefited from the generosity and ingenuity of our community. This includes donations of N95 masks from lawn service companies and homemade cloth masks. But good fortune has its limitations. Our PPE supply is still too scarce to be able to safely and sustainably provide community COVID-19 testing in any capacity. While our IDNow machines sit idle, we do not expect point-of-care tests to be made available to us anytime in the foreseeable future.

While the pandemic has laid bare the glaring disconnects in supply and demand across economic sectors, this is also true in healthcare. As hospitals and emergency departments post record census numbers, inundated with demand, the majority of community physicians and surgeons have seen a significant decline in patient care. The Commonwealth Fund notes that the volume of ambulatory office visits in the U.S. dropped steeply by almost

60% in mid-March of this year. Why does this matter? Medical practices are no different from the millions of small businesses across the country and our fate should be no different. Yet there is opportunity here. As states roll out strategies for re-opening, community medical providers may yet play a critical role that seems to be overlooked thus far in the national discourse.

In [National Coronavirus Response: A Road Map to Reopening](#), Mark McClellan, Director of the Duke-Margolis Center, and his colleagues comprehensively outline the four phases of action needed to eliminate the current threat and to prepare for future pandemics. Essential steps in Phase 1 include increasing nationwide testing capacity, implementing a COVID-19 surveillance system, and mass scaling of contact tracing.

In order to implement an effective contact tracing system across the nation, a recent [Johns Hopkins Center for Health Security](#) report estimates that an initial 100,000 contact tracers will be required. For perspective on the scale of this workforce mobilization, the [U.S. Census](#) employed under 42,000 in April. State and local public health entities that are already strapped for funds and resources are assigned the daunting task of building this infrastructure. How about as a first step, do what you can with what you've got?

Engage the Medical Home

For a national test and trace program to be successful, engendering trust

and confidence is critical. This requires partnership with medical providers who have established relationships with their patients and communities. [According to the CDC](#), 84% of American adults in 2018 had an encounter with a health care professional in the preceding year. For children, this figure was almost 94%. As noted by the [CDC's expanding list](#) of COVID-19-related symptoms, the presentation can be varied, especially for mild cases that do not require hospitalization. These symptoms could potentially be due to a number of illnesses or conditions, not just COVID-19. Seeking care and evaluation from a medical provider, who knows your history and risk factors and will guide you through your illness, is fundamental to good medical care.

Leverage Existing Public Health Partnerships

Community medical providers have a longstanding history of evaluating, testing, and [reporting communicable diseases](#) in partnership with local health departments and the CDC. These relationships and workflows already exist. From seasonal flu, to chlamydia and Hepatitis A, community medical providers provide essential frontline diagnostic and reporting services on a daily basis to protect the public's health.

Rely on Available Expertise

While COVID-19 is very much a public health crisis, we must not overlook the need to safeguard the privacy rights of individuals, as with any other medical condition. Community medical providers and their staff are

already trained in HIPAA compliant practices. Primary care providers and medical homes also possess experience in patient education and care management needed to help individuals navigate the course of illness.

Support Community-Driven Action to Address Disparities

Socioeconomic and racial disparities are clearly coming to light as the pandemic evolves. The [CDC](#) reports that racial and ethnic minorities disproportionately bear the burden of illness and death from COVID-19. Social determinants of health are complex and challenging to recognize or understand for those not familiar with affected communities. For this reason, it is imperative that public health measures to implement an effective test and trace strategy be rooted in partnership with community-based organizations and medical providers who are of the community. *Where you are.*

While community medical providers can by no means be expected to fill the gap for all test and trace needs, they can be a powerful ally in quickly scaling and complementing the endeavors of public health departments. Empower us to do what we do best – care for our patients and communities. This collaboration will require clear communication from public health leaders and prioritized access to resources such as testing supplies and PPE in order for community providers to implement widescale testing and reporting. For medical

clinics that have the capacity and desire to contribute to contact tracing, they should be recruited in this effort. In order for this partnership to be successful, training will be required, as well as a creative payment model that captures the value of the work being performed.

As a nation, we have more reserves than we realize in combatting this pandemic. *Do what you can, with what you've got, where you are.* Effectively deploying these resources to where they are needed as we build and expand capabilities will be key. *We are here.*

PRIVACY AND DIGITAL CONTACT TRACING

BY M. BENNETT WRIGHT

Privacy policy is a balancing act. Bigger threats warrant bigger privacy sacrifices. The greatest privacy losses spawn from threats with no clear end-dates. For example, when the events of 9/11 initiated the PATRIOT Act, Americans accepted some privacy invasions in order to counter terrorism. By nature, terrorism never fully dies, so the privacy decisions are here to stay. Similarly, privacy invasions made to counter the coronavirus could easily become permanent, because the threat of disease never truly ends. Currently, leaders are investigating digital contact-tracing: phone apps that warn users when their phones have been near infected individuals. While this may be key to countering COVID-19, leaders should carefully weigh such efforts against immediate and long-term privacy impacts. Here, I consider some issues that leaders should balance in evaluating contact-tracing methods, and briefly discuss current efforts by Apple and Google to establish contact-tracing software.

Privacy Values

Fully outlining the value of privacy is beyond my scope, but some in-depth commentary can be found here. Sometimes, governments and companies have misused surveillance

information to discriminate and to curtail civil rights. Even without misuse, surveillance limits citizens' ability to choose what portions of their lives are public. Moreover, any form of personal data collection risks security breaches and exposure to unintended parties. Leaders should weigh these concerns in considering new contact-tracing methods.

Efficacy

Efficacy is essential – if it won't work, it isn't worth a decrease in privacy. Low adoption rates, insufficient testing capabilities, high infection rates, or technological challenges could derail contact-tracing efforts. Unless we have confidence in those areas, we shouldn't implement digital measures that significantly intrude on privacy.

Contact-tracing apps operate by warning users when their phones have been near the phones of infected individuals, so the system only functions if adoption rates are high. If the infected person doesn't have the app, their contacts aren't protected. Some estimates say that in order to be useful, around 80% of smartphone users would need to install the app. However, Pew Research indicates that Americans are split on the acceptability of the

government tracking their cell phones to deal with COVID-19, so assuaging privacy concerns may be essential to high adoption and efficacy of the app.

To warn app users, we need to know that their contacts are infected, and that requires readily accessible testing. Though testing capabilities continue to improve, they have been inadequate thus far. Until those that need tests can easily receive them, digital measures will be ineffective. If people regularly come in contact with infected individuals, digital contact-tracing apps notify almost everyone to quarantine, and then the system is little better than a general stay-at-home order. For contact-tracing to enable the economy to remain open, infections must be sufficiently low.

Finally, the technology has to work. If these elements are not in place, then leaders should hesitate to implement digital contact-tracing, because it might violate privacy interests without any positive effect.

Consent

Voluntary systems are more ethical, useful, and likely to be downloaded. Because high adoption rates are a key to success, it may be tempting to require all smart-phone users to download a contact-tracing app. But verifying whether individuals have the app requires that information on the app be personally identifiable, which raises significant privacy concerns. Moreover, with citizens already questioning the ethics of contact-tracing, trust will be essential, so greater levels of

voluntariness may actually increase adoption.

Limited Government Access

As the Supreme Court has noted, location tracking can reveal intensely personal information about an individual's life, including "familial, political, professional, religious, and sexual associations." If you know where someone has been, you can learn almost anything about them. As such, American law recognizes that government access to such information should be limited. Because it can reveal so much about a person's beliefs and lifestyle, intrusive surveillance has historically enabled governments to curtail religious freedoms, civil rights, and lifestyle choices. Citizens' justified hesitation to provide such information may reduce adoption rates.

Even legitimate uses by law enforcement might dissuade many from downloading the app. Thus, limited (or even zero) direct government access to the data would enhance both privacy and efficacy. Likely the only way to prevent such access is to avoid storing the data in one place, and giving only individual users control over their data. governments to curtail religious freedoms, civil rights, and lifestyle choices. Citizens' justified hesitation to provide such information may reduce adoption rates. Even legitimate uses by law enforcement might dissuade many from downloading the app. Thus, limited (or even zero) direct government access to the data would enhance both privacy and efficacy.

Likely the only way to prevent such access is to avoid storing the data in one place, and giving only individual users control over their data.

Minimal Data Collection

Because certain data may be more helpful than anticipated, app developers may want to collect many types of data over long swaths of time. However, developers should avoid this temptation. Not only does greater data collection further invade privacy, but it can be less effective. Minimized data collection simplifies apps, which both streamlines development and makes it easier to secure the data. Getting the app sooner would increase its impact, and data security would increase adoption.

Apple & Google Contact-Tracing Using Bluetooth

Apple and Google have entered into a rare partnership to enable contact-tracing apps to work on both Android and iOS (thereby covering essentially 100% of smartphones). A good summary is here. Decentralizing data collection, this effort reduces some of the major privacy concerns. Rather than amassing everyone's location information in a government-accessible database, each individual phone maintains a record of which phones it has been near. Users then choose to notify those phones if they receive a positive diagnosis. Moreover, the data is not personally identified, and the identifiers for phones regularly change. Some technical issues remain (Bluetooth was not designed for precise distance measurements), but the Google and

Apple partnership seems encouraging and privacy conscious overall.

Digital contact tracing could be an important part of our response to COVID-19. However, before implementing any privacy-invasive policy, leaders should ensure that elements necessary for efficacy are in place. As specific features develop, governments also should consider issues like voluntariness, data minimization and decentralization, and security. The Apple and Google partnership is promising, but leaders should carefully weigh each of these concerns, and more, throughout development. The privacy sacrifices we make in this crisis will likely establish our new normal for years to come.

COVID-19 AND THE NURSING PROFESSION: WHERE MUST WE GO FROM HERE?

BY JACQUELINE NIKPOUR,
LAUREN ARRINGTON,
ALLYSON MICHELS,
AND MICHELLE FRANKLIN

The COVID-19 pandemic highlights many of the fractures in our health care delivery systems. Shortages of testing and a lack of contact tracing have created an inadequate public health response to this crisis, leading to overwhelmed hospitals and health care workers, who are simultaneously managing shortages of personal protective equipment (PPE). Extended stay at home orders, while necessary to prevent disease transmission, may have severe impacts on access to needed care, such as specialty care and behavioral health services. Historically marginalized populations, such as Black and working-class communities may experience a disproportionate impact, both in terms of case numbers and the longer-term societal impact due to long-extant health disparities. While the importance of a strong public health infrastructure and care delivery systems that promote population health outcomes have long been known, the COVID-19 crisis has added a sense of urgency to

these needed reforms. As we work to heal and transform our fractured health care delivery systems, nurses must be at the helm.

Nurses are well-suited to make population health decisions, address social drivers, and provide leadership in health crises such as COVID-19. Situated at the intersection of medical and social expertise, nurses provide holistic, patient- and community-centered services to promote affordable, high-quality care. Nurses have been frontline in caring for COVID-19 patients, as well as in prevention, education, and other preventative health measures to slow the spread of disease. The current pandemic has immeasurably transformed the profession – impacting the available workforce, highlighting inequities in health outcomes, and opening new opportunities in care delivery. As we begin to move forward past the pandemic and into its aftermath, the nursing profession must grapple with its future, and understand how we as

the nation's most trusted profession – now, more than ever – can be part of the solution to the long existing societal health challenges highlighted by the pandemic.

Addressing Inequities

There is a clear understanding that, across the country Black, Latinx and American Indian populations are experiencing a disproportionate level of suffering and death during the COVID-19 pandemic. Racial and ethnic inequities in access to high quality health care services existed before the pandemic and have carried over into disparities in access to COVID-19 testing and treatment (see *Durbha, Holtzman, and Matula reflection*). Black and Latinx communities find it harder to practice social distancing at home and at work and often face employers that do not prioritize their safety and health. While unemployment related to COVID-19 has devastated all communities, Black and Latinx workers are experiencing the highest rates. Additionally, the stress of racism predisposes many nonwhite communities higher rates of morbidity and mortality during the pandemic.

Nurses must recognize and help address the ways in which societal inequities perpetuate disparate health outcomes. While nursing education focuses predominantly on providing acute care in hospital settings, COVID-19 has shown the importance of educating current and future nurses to address health outcomes at a population level.

As systematic bias plays a large role in perpetuating these disparities, we must prepare a nursing workforce educated to provide culturally relevant care and address structural determinants of health. Population health competencies, including advocating for social justice; making data-based, culturally relevant decisions in care; and, promoting high-quality outcomes for diverse populations are necessary at all levels of education. Furthermore, clinical training should prepare nurses for roles in diverse settings, and funding priorities should align with population health management and related measures.

Expanded Nursing Workforce Roles

Currently, most workforce discussions have been centered around hospital-based care, and little attention has been paid to the public health nursing workforce. This is desperately needed to mitigate the current pandemic, address the societal health consequences that have resulted, and manage future acute and chronic population health crises. Indeed, since the H1N1 pandemic in 2009, the nation lost nearly a quarter of the entire public health workforce with no plan for refunding. Given that the majority of health department employees are nurses, it is likely that many of those eliminated were nursing positions.

Despite its importance in managing the current outbreak, and its crucial role in health promotion, education, and prevention of chronic disease, public health funding accounts for just 3% of all health expenditures. In its current state, the public health

infrastructure and workforce are critically underfunded, limiting their capacity to drive an effective response of surveillance, contact tracing, and data sharing, and contributing to the pandemic's catastrophic societal effects (*see [Pothen reflection](#)*). Issues such as personal protective equipment and ventilator shortages may very well have been significantly lessened if the “upstream” preventative approach of a strong public health system were implemented in the early days of the pandemic.

COVID-19 may be the impetus to revive funding for a strong public health workforce. The pandemic has highlighted the need to address health needs at a population level, make timely, evidence-based decisions, and provide a unified voice in educating the public – roles that public health nurses have long been experts in. Furthermore, the societal health impacts of COVID-19 will persist long after the initial outbreak, particularly in areas of health equity. Diversion of the population health workforce to focus on COVID-19 needs has led to cuts in services such as the Nurse-Family Partnership, which delivers maternal and infant care to high-risk, low-income mothers. Investments in these nurse-led services going forward will be critical to mitigating these long-lasting inequities.

Other areas exist for expansion of the nursing workforce into community-based settings. Caregivers may be more reluctant to place their loved ones in a long-term care facility, as residents are unable to leave or have

visitors, and as COVID-19 outbreaks are staggeringly high. For elderly individuals who need care, the demand for home health services could thus rise exponentially. Furthermore, as many behavioral health treatments have been delayed and group-based therapies socially distanced, the demand for mental health care (*see [Neptune and Nguyen reflection](#)*) could also create more opportunities for nurses. Lastly, as the Centers for Medicare and Medicaid have expanded flexibility for telehealth services, the number of individuals able to access primary care and specialty services is likely to increase. This may open up new roles for nurses in connecting individuals to social services, coordinating care, and serving as the first point of contact for greater numbers of patients and families.

The COVID-19 pandemic has also heightened the need to transform perinatal health care with nurses at the forefront of innovative strategies to improve care and outcomes. Prior to the pandemic, there were efforts underway to reduce the U.S. maternal mortality rate, which is the highest among similarly wealthy countries. During the pandemic, pregnant women have faced extreme measures, including giving birth alone, and restrictions on doula services, hydrotherapy and ambulation during labor. Increasingly, childbearing families have sought care in the community to avoid hospital exposure to COVID-19. Nurse-midwives and public health nurses are experts in providing integrated care between home and hospital that meets the needs of

childbearing families and improves outcomes. Moving forward, nursing must grow opportunities for integration of nurse-led programs and services into perinatal health care, as has been done in many countries with far better perinatal outcomes.

Primary Care and Telehealth

The importance of primary care and outpatient management (e.g., home health) and nurses' role in care delivery and coordination within these settings are well established. However, COVID-19 caused a collision with a surge of patients needing testing and treatment for COVID-19 in addition to baseline care needs. COVID-19 has taught us the need to keep people in the community and save hospitalizations for only those who have the most critical needs as hospitals become more dangerous for patients and health care workers. The risk of COVID-19 exposure in hospital and clinic settings accelerated the uptake of virtual provision of such services (*see [Boylston and Boisvert, Durbha, and Nguyen reflections](#)*). For example, telehealth use has surged but unprecedented demand has overwhelmed telehealth services. Nurses have provided valuable improvements to telehealth as well as evidence-based solutions to respond to this demand.

Nurse- and advanced practice registered nurse-provided telehealth has the potential to greatly expand access and quality of care. Telehealth is one way nurses can address critical unmet health needs post COVID-19 – from basic primary care to virtual

hospitals for more intense treatment. In order to realize this potential, innovation on the part of nurses, public health departments, health systems, and policy makers are needed. This will also require strategic investment in nursing education to address the nursing shortage that is present and intensifying. By 2022, more than 500,000 experienced nurses are expected to retire and this is not taking into account changes to the frontline RN (registered nurse) workforce as a result of COVID-19. With the nursing shortage intersecting with this pandemic, a more substantial commitment to the nursing workforce, education, and training on virtual monitoring and treatment will be needed to address the demands and innovations. By providing virtual care, nurses can bridge geographic barriers to bringing services to patients wherever they are located.

Untapped Capacity

Furthermore, the COVID-19 pandemic has illuminated the untapped capacity from all levels of nursing roles still changing going forward, including clinical practice, leadership, health policy, advocacy, and research. Nurses have a unique perspective and capability to translate and integrate evidence from these areas into practice. As the health professional shortage has been exacerbated by the crisis, many states have permitted full practice authority for advanced practice nurses – and these new licensure laws may lead to long-lasting change going forward. This long fought for reform has the potential to expand

access to high-quality, affordable primary care, where the majority of NPs (nurse practitioners) practice. At the same time, new roles for registered nurses in primary care can strengthen primary care's delivery of services – and this may be especially true, as burnt out hospital RNs may be seeking positions in other settings after the acute pandemic. By maximizing the capacity of the current primary care nursing workforce, services such as care coordination, referral to social resources, and addressing social determinants of health, may be more available in primary care settings and lead to higher-value care.

Another opportunity for nursing growth in the aftermath of COVID-19 is in hospital and health system leadership. Health system decisions involving PPE shortages, staffing, and health informatics require the input of frontline individuals who understand deeply the impacts of those decisions. Nursing representation on hospital and health system boards can provide invaluable insight, particularly during disease outbreaks and other population health crises.

Conclusion

The COVID-19 pandemic has made clear that our care delivery systems are fractured and lack an effective, coordinated response to population health crises. Effectively addressing these gaps, both during the immediate crisis and in the long-lasting aftermath, will require the close engagement and leadership of the nursing community. Nurses have

a unique perspective on and expertise managing infectious disease outbreaks, mitigating health inequities, addressing social drivers of health, and designing innovative, patient-centered care delivery models. These capabilities are critical - now, more than ever – to reimagining a better health care system, one where equity and population health are at the center.

PANDEMIC RESPONSE IS A DEFENSE GAME, THE U.S. IS PLAYING OFFENSE

BY MERIL POTHEN

Like many American kids in the suburbs, I grew up playing soccer. As a defensive fullback, I stood guard and enviously watched my midfielder and forward teammates attempt dramatic plays and exciting shots on the other end of the field. Playing defense wasn't flashy. But, when a swarm of players came barreling towards our goal, no amount of offensive panache could save us. What could mitigate a goal was my defense teammates and I operating in lockstep, diffusing the pressure and dampening the other team's momentum.

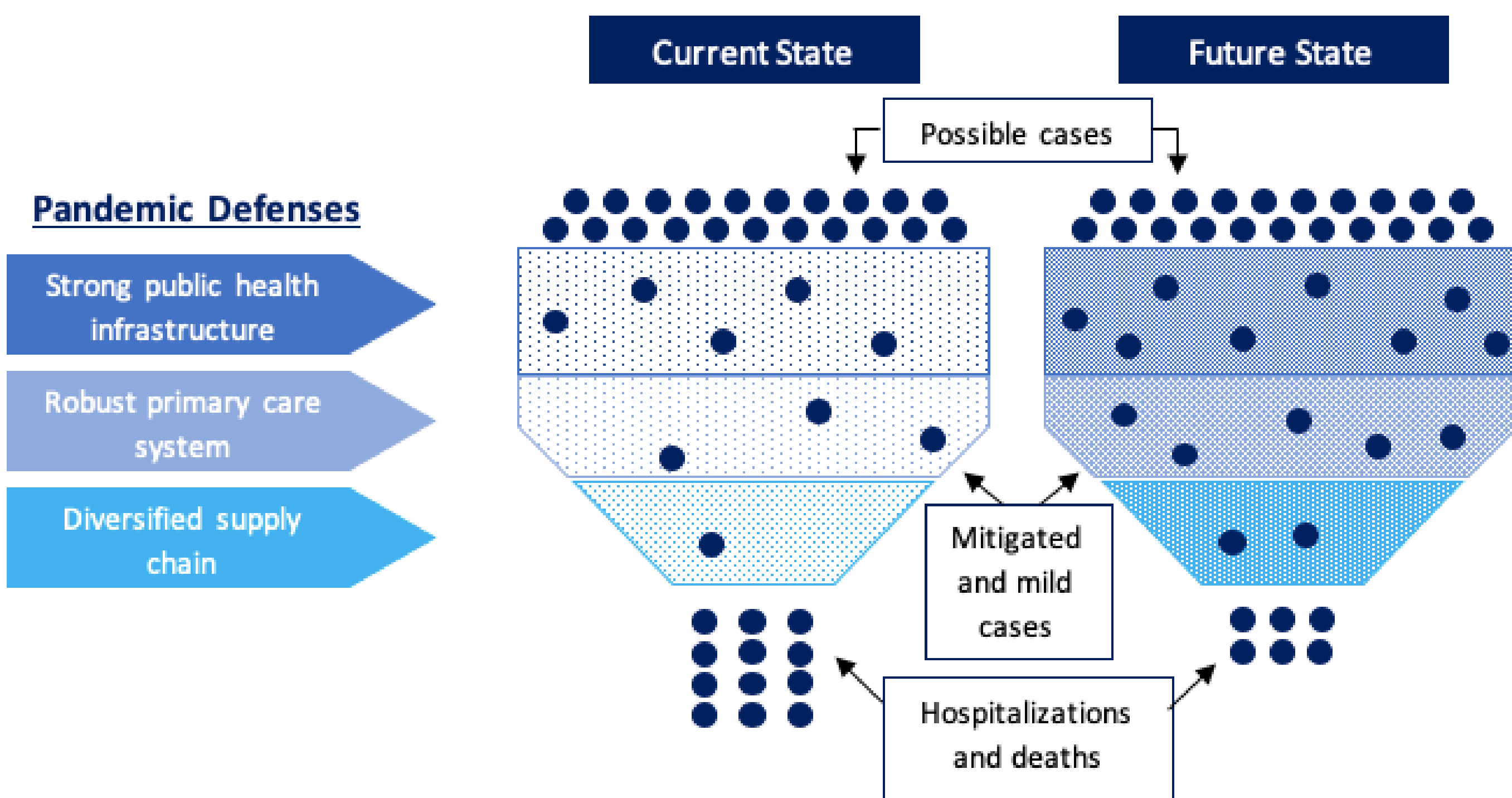
While the COVID-19 pandemic is clearly higher stakes than my childhood soccer games, the strategy is similar. When faced with a new and aggressive opponent, a strong defense can hold off losses while an offensive play is developed, tested, and deployed. Although vaccine and treatment development are incredibly important in the fight against COVID-19, they are not an effective first line response. As the U.S. approaches 2 million cases and 112,000 deaths, we must address where our health care system is

failing Americans during this pandemic to ensure we're better prepared for the next one. Pandemic response for a novel disease can be thought of as a layered filter, with each layer "catching" cases to reduce the number of hospitalizations and deaths. An effective pandemic response "filter" for the health care system consists of a well-funded public health infrastructure, a robust primary care system, and a diversified supply chain (Figure 1).

Strong Public Health Infrastructure

The nation's public health infrastructure is an essential first layer of defense during a pandemic, providing surveillance, education, and contact tracing support. Despite evidence showing a median 14:1 return on investment for public health initiatives in high income countries, public health is chronically underfunded at the federal, state, and local level. In 2018, only \$286 of the more than \$11,000 spent on health care per person that year went to public health. The Centers for Disease Control's (CDC) budget has fallen by 10% over the past decade

Figure 1: The Pandemic Response Filter



The early months of the COVID-19 pandemic in the U.S. revealed gaps in our defenses, resulting in fewer prevented and mild cases and more hospitalizations and deaths. The image on the right represents a stronger future state than our status quo, where gaps in our public health, supply chain, and primary care defenses are filled and able to “catch” more cases before they become severe and/or end in death.

and the CDC’s funding to state and local governments for emergency preparedness dropped 33% from FY03-FY19. Cuts have contributed to over 55,000 eliminated positions at local health departments from 2007-2018.

Under-resourced public health departments cannot build the infrastructure needed to combat health crises like COVID-19. As shown by emergency funding for Ebola, Zika, the opioid epidemic, and now COVID-19, systemically under-resourced public health systems do not have the structures in place to most effectively use surge funding. Instead of a reactive and erratic approach to funding, the U.S. must

commit to sustained, stronger investment in our public health system.

Robust Primary Care System

When health care providers began canceling appointments and services to prevent COVID-19 transmission, elective procedures and in-person visits dropped by 70-80%. This drastic drop in volume was a serious hit to provider revenues. Although hospitals have received advanced payments to smooth revenue losses, there have been no specific disbursements for primary care. When well-resourced during an outbreak, primary care can triage and test, educate

patients and family members, and support epidemiological surveillance efforts. Unfortunately, the American primary care system's potential is hindered by clinician burnout, workforce shortages, and low investment (5% of total medical spending). A reliable revenue stream that disconnects payment from volume can ease shocks for primary care providers during a crisis. Alternative payment models (APM), like Comprehensive Primary Care Plus and Primary Care First, pay providers PMPM (per member per month) fees for every patient they are responsible for, as long as specific outcome and quality metrics are met. This arrangement provides predictable revenue, relieves pressure for volume-based care, and grants flexibility in care plans.

An APM for community health centers serving low-income and vulnerable populations would be particularly effective in pandemic preparedness. It is well-established that COVID-19 disproportionately affects communities of color. These communities have been systematically disenfranchised and often live in conditions that prevent effective distancing, are more likely to be essential workers and have inadequate sick leave, and more often uninsured with less access to quality health care (*see Brown and Xie, Holtzman, Nikpour, and Brown, and Durbha, Holtzman, and Matula reflections*). Population-based and lump-sum payments to invest in community health workers, culturally-sensitive and relevant education, and non-medical needs can lessen the impact of a new infectious disease on the community.

Diversified Supply Chain

A final early COVID-19 challenge was shortages of essential personal protective equipment (PPE), medical equipment, testing supplies, and medications. Although hospitals and universities are collaborating to distribute supplies and community members are making masks and gowns, clinicians are still rationing and reusing single-use PPE. Nearly 600 health care workers on the front line have died from COVID-19 since the pandemic began. Shortages in COVID-19 testing supplies slowed down the country's testing rate, risking increased community spread. Heightened demand for antibiotics, hydroxychloroquine, and other medications left hospitals scrambling, and those with chronic conditions unable to fill needed prescriptions. To keep costs low, U.S. health care supply chains are lean and narrow. Specific countries or regions are often the sole producer of a certain health care good. Test swabs, for example, are mainly made in Northern Italy. Face masks are largely sourced from China, and most active ingredients for medicines are produced in China and India.

Health care leaders must diversify the health care supply chain to prevent future shortages during a crisis. While single-source supply chains provide tempting low prices, bringing on additional domestic and international suppliers allows for a reliable supply and an ability to scale up production when needed. This reform should also move upstream, diversifying raw material producers for supplies. In addition to increasing supply, the federal government should play a larger role in coordinating.

procurement and distribution of supplies during a crisis. Throughout this pandemic, states, hospitals, and universities have created informal networks to ship supplies to hard-hit regions. Federal support to formalize this coordination will prevent competition and better ensure distribution based on need.

Looking Forward

The ongoing COVID-19 pandemic has taught us that a rapid, defensive response is the best tactic to decrease infections and deaths. To be better prepared for the next outbreak, the U.S. must make reforms now to develop a well-resourced public health infrastructure, robust primary care, and diversified supply chain. Like playing defense on the soccer team, this work often goes unheralded and seems banal in comparison to vaccine and treatment development. But, when a new opponent comes hurtling towards our family, friends, and communities, it will be the only barrier standing in the way. For our future, let's ensure that defense is strong.

WHAT DOES COVID-19 MEAN FOR CHILD WELFARE?

BY JASMINE MASAND

Rates of reported child maltreatment have plummeted in recent weeks, and at first glance, falling rates of child maltreatment referrals might seem hopeful. In Los Angeles, reported cases have dropped nearly fifty percent, and child welfare workers in Texas have observed a dip in child maltreatment tips that began in early March. In health care, we often equate success in a given area to decreased rates of adverse events, such as decreased rates of hospital readmissions or less unnecessary emergency department utilization. However, in our new separated reality, decreasing rates of suspected child maltreatment could signal that more children are now isolated without access to other adult and community supports.

Vulnerable children are now isolated from the adults that often act as the eyes and ears of the child welfare system, and the drop in reported child maltreatment suggests that the children who are struggling in their home environment are more isolated than ever. In North Carolina, over half of child welfare referrals warrant an investigation or assessment, and over 90% of maltreatment cases involve the child's parents. Most child

welfare referrals come from teachers, health care providers, neighbors, and other adults who interact with a child and their family. With school cancelled for the rest of the year, and many people avoiding doctor's office and other routine activities, caring adults are unable to monitor the most vulnerable children in our communities.

In addition to reporting challenges, experts worry about a potential increase in the incidence of child maltreatment and child exposure to intimate partner violence within homes. As WUNC and the New York Times recently reported, research has shown that the COVID-19 circumstances has increased stress levels in working families, especially when family members have experienced job loss. Although it's difficult to draw an exact link between increased family stress and child maltreatment, the anecdotal evidence is troubling. Hospitals in Orlando and Texas have reported a significant increase in hospital visits for children with serious injuries related to suspected abuse.

The combined effects of strain on working families and isolation of

children exposes the limitations of an already stressed child welfare system. North Carolina child welfare services, including foster care, are administered at the county level. This year, I was part of a graduate student team researching best practices to improve health care for foster children in North Carolina. I learned that key service providers like social workers, teachers, doctors, caregivers in the foster care system, and even law enforcement officers all have critical insight into a child's well-being. In recent weeks, I have heard anecdotally how this network of caring adults has been weakened by the pandemic.

My good friend who is an educational psychologist in training now worries about the children she used to counsel on a weekly basis, since many parents cannot arrange remote counseling sessions for their children.

Another peer who works as a social worker has been overburdened with an ever-increasing number of families in need, and the available social services and community organizations are backlogged with requests for assistance.

The pandemic has increased financial strain, food insecurity, and housing insecurity in our communities, and these social drivers of health must be addressed at the community level to support the mental and physical health of vulnerable children (*see Xie et al and Brown and Xie reflections*). These challenges, along with domestic violence, are included in North Carolina's Healthy Opportunities initiative to address social drivers of health as part of

health care in the state. As our health and human services infrastructure becomes less burdened by COVID-19, state leaders should consider investing in social insurance benefits and community-based supports. Policymakers at the local, state, and federal levels can consider the following suggestions to assist at-risk youth and families during the pandemic:

In the short term, state and local agencies can compile online resources for caregivers to help facilitate access to online education platforms and information about telemedicine coverage and any other relevant changes in Medicaid covered services or protocols. Some states, including Tennessee and Kentucky, have highlighted resources for telemedicine and online content for foster children on the main pages of their health and human services agency webpages.

In addition, policymakers should continue promoting information-sharing and telemedicine platforms that can support health care engagement across foster children, caregivers, and other key health and child welfare stakeholders. Strict data regulations are necessary to protect the privacy of children in foster care, but they can also limit coordination between child welfare and health care entities. Ongoing efforts to expand the NCCARE360 human services referral network will help the state meet child welfare-specific goals by supporting families holistically. The platform could also be used to track community-based services more effectively for children in foster care. In addition, increased

use of telemedicine platforms due to the pandemic could create a lasting opportunity for greater coordination between child welfare case workers and health care providers.

Broader social supports such as increased food assistance benefits and rent relief can provide whole-family support by decreasing stress in homes and increasing permanency for children who have interacted with the child welfare system. Increasing access to and monetary value of benefits like SNAP, TANF, and unemployment could reduce family stress and improve mental health. Cash and food assistance programs can also contribute to children's physical health by ensuring adequate nutrition and enabling needed health-related spending.

Finally, child welfare agencies and health and human services administrators can encourage the use of Medicaid and CHIP coverage for behavioral health services for children. Under Medicaid and CHIP laws, family counseling services can be covered for children with certain behavioral health diagnoses. Policymakers should push information about telemedicine coverage for behavioral health services to increase access for families that need extra support.

Children may be less susceptible to the worst physical symptoms of COVID-19 illness, but the pandemic critically endangers children who are already at-risk due to their home environment. Policymakers must recognize that investing in short-term aid and social supports to families under financial strain could

protect the youngest and most vulnerable in our communities.

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ABOUT THE MARGOLIS SCHOLARS IN HEALTH POLICY AND MANAGEMENT PROGRAM

The Margolis Scholars program is a prestigious program for Duke University students that demonstrate strong interest in and commitment to a career in health policy and management, as well as leadership potential to improve health policy. Named in honor of Robert Margolis, M.D., the founder of Duke-Margolis and a pioneer of innovative integrated care delivery models, the Margolis Scholars program provides promising students with the necessary knowledge, skills, and abilities to be the next generation of health care leaders. Margolis Scholars is a competitive program open to students at undergraduate and graduate levels. Selected Scholars are engaged in the program for 1 to 2 years, depending on their program of study.

The Margolis Scholars program has four key components: *knowledge building, skills enhancement and training, professional development, and community building and networking*. Activities offered across the four components include, but are not limited to:

Knowledge Building: participate in health policy coursework, attend bi-weekly Margolis Seminars, and engage in a multi-day intensive health policy workshop.

Skills Enhancement & Training: participate in research, simulation and skills labs, and teaching assistantships, as well as plan policy events and participate in peer mentorship programming.

Professional Development: receive 1:1 academic and professional advising/mentorship, attend professional conferences, receive internship/fellowship guidance and placement, and plan community service projects.

Community Building & Networking: receive monthly policy newsletters, plan annual events, attend Margolis Retreat and other social/alumni events, and participate in unique opportunities to meet experts in the field.

For further information on the Margolis Scholars program, please visit <https://healthpolicy.duke.edu/margolis-scholars>.

