The American Holistic Nurses Association (AHNA) supports the Center for Disease Control (CDC) and the World Health Organization (WHO) in acknowledging the immediate global public health risk of the COVID-19.

This update is current to time of release. Previous updated information is reduced weekly to keep the report as concise as possible. For a comprehensive appraisal, please review subsequent weekly updates (since Feb 2020) at: https://www.ahna.org/Home/Resources/Coronavirus-COVID-19

The mission of AHNA is to illuminate holism in nursing practice, community, advocacy, research, and education. Our vision is that Every Nurse Is a Holistic Nurse. This is exhibited as we incorporate the evidence-based research of multiple nursing specialties in our COVID-19 updates. Please utilize Table of Contents to navigate to sections pertinent to your nursing practice.

Self-Care Sharing: To sustain nurses in the Holistic Core Value of Self-Care AHNA is providing FREE public access to STRESS MANAGEMENT and RESILIENCE materials!

Clinical Updates

TRANSMISSION
Using a modelling approach to reconstruct the dynamics of COVID-19 (1/1-3/8, 2020) based upon 32,583 laboratory-confirmed cases, Hao, X., Cheng, S., Wu, D. et al. (2020) Reconstruction of the full transmission dynamics of COVID-19 in Wuhan. Nature, identified "high covertness and high transmissibility" as key features to the virus. The researchers accounted for pre-symptomatic infectiousness, time-varying ascertainment rates, transmission rates and population movements within the study and "estimate 87% (lower bound 53%) of the infections before March 8 were unascertained, potentially including asymptomatic and mild-symptomatic cases; and a basic reproduction number R0 of 3.54 (95% credible interval [CrI]: 3.40-3.67) in the early outbreak, much higher than for SARS and MERS. Nishiura, H., Kobayashi, T., Miyama, T., et al. (2020).
Estimation of the asymptomatic ratio of novel coronavirus infections (COVID-19). *International journal of infectious diseases: IJID* 4, 154-155. Despite undetected symptoms of many cases, the study confirmed Wuhan’s prompt non-pharmalogical interventions (vigorous and multifaceted containment efforts such as wearing face masks, social distancing, and quarantining close contacts) effectively blocked the transmission from unascertained cases. Projections from March 8 revealed these measures prevented a 96% increase in contagion.

Understanding the proportion of unascertained cases and their transmissibility is critical for prioritization of surveillance and on-going control measures, “...the probability of resurgence following lifting of all interventions after 14 days of no ascertained infections, estimating it at 0.32 and 0.06 based on models with 87% and 53% unascertained infections, respectively, highlighting the risk posed by unascertained cases in changing intervention strategies. These results provide important implications for continuing surveillance and interventions to eventually contain COVID-19 outbreaks.” Removing all interventions after 14 days without effective surveillance or strategy to prevent super spreading, results in the predicament evolving in the United States, Brazil, and other uncontrolled areas.

**PRESENTATION**

Fasting Blood Glucose above or equal to 7.0 mmol/l at admission is an independent predictor for 28-day mortality in patients with COVID-19 without previous diagnosis of diabetes. Glycemic testing and control are important to all COVID-19 patients even where they have no pre-existing diabetes, as most COVID-19 patients are prone to glucose metabolic disorders. Wang, S., Ma, P., Zhang, S. *et al.* Fasting blood glucose at admission is an independent predictor for 28-day mortality in patients with COVID-19 without previous diagnosis of diabetes: a multi-center retrospective study. *Diabetologia* (2020) Results of a retrospective study of 605 consecutive COVID-19 patients admitted between Jan 24- Feb 10, 2020, examined demographic and clinical data, FBG, 28-day outcomes, in-hospital complications, and CRB-65 scores. The CRB-65 is an effective measure for assessing the severity of pneumonia and is based on four indicators, i.e. confusion, respiratory rate above 30/min, systolic blood pressure under 90 mmHg, or diastolic blood pressure less than 60 mmHg, and age over 65 years. Of those enrolled, 114 died in hospital. Multivariable Cox regression analysis revealed age, male sex, CRB-65 score 1-2, CRB-65 score 3-4 and Fasting Blood Glucose FBG ≥7.0 mmol/l were each independent predictors for 28-day mortality. The OR for 28-day in-hospital complications in those with FBG ≥7.0 mmol/l and 6.1-6.9 mmol/l vs <6.1 mmol/l was 3.99 (95% CI 2.71, 5.88) or 2.61 (95% CI 1.64, 4.41), respectively. Fasting BG on Admission as Independent Predictor for 28 day mortality.

Chest radiography of people who are seriously ill with respiratory symptoms when they present to hospital can help to identify those with covid-19 pneumonia. "No fixed definition of covid-19 pneumonia exists- the term is used describing patients with clinical features of covid-19 infection who have either clinical or radiological evidence of pneumonia or acute respiratory distress." The *British Medical Journal (BMJ)* relates signs suggestive of covid-19 pneumonia for non-radiologists "as prompt review and report from an onsite or remote radiologist is not always available". Those pointers include:

"Whiteness in the lungs" indicative of increased lung density, and possibly the 'ground glass opacity' alone or in conjunction with peripheral (approximately half of cases), coarse, horizontal white lines, bands or reticular changes. Bilateral lung involvement is common (73%) but unilateral does occur.

*Consolidation (pictured to left) or an absence of lung markings due to whiteness-usually presents in severe disease.*

Review the radiograph systematically, looking for abnormalities of the heart, mediastinum, lungs, diaphragm, and ribs, and remembering that radiographic changes
of COVID-19 pneumonia can be subtle or absent" (BMJ).

PROGRESSION

Critical Care Management: The administration of glucocorticoids is one of several agents within protocol for COVID-19 treatment. The Journal of Hospital Medicine published an observational study of 1,806 COVID-19 patients, to determine whether systemic glucocorticoid treatment in COVID-19 patients produces reduced mortality or correlates with need for mechanical ventilation.

140 patients received glucocorticoids within 48 hours of admission. Patients "who presented with initial C-reactive protein (CRP) greater than or equal to 20 mg/dL noted significantly reduced mortality or mechanical ventilation, while glucocorticoid treatment of patients with CRP less than 10 mg/dL were associated with significantly increased risk of mortality or mechanical ventilation." When admitting patients with low inflammatory CRP, consider this observation; in this observational study, steroid treatment more than doubled the risk of mortality or mechanical ventilation. Research concludes the benefit of glucocorticoids is substantial when dosage is timed appropriately with CRP increase. Keller, M., Kitsis, E., Arora, S. et al. Effect of Systemic Glucocorticoids on Mortality or Mechanical Ventilation in Patients With COVID-19. J Hosp Med. 2020

Long Term Sequelae: Removing a SARS-CoV-2 patient from a ventilator feels miraculous- and it is not to be discredited. The day the medical coma ends is also a beginning. Patients are transferring to rehabilitative centers to recover occupational health skills, activities of daily living, or in some cases, to await homecare. The after effects of COVID-19 are not immediately resolving. While one may return to 'normal' in weeks, complaints of brain fog or disabling fatigue are not uncommon. Others experience on-going breathlessness and repeat visits to the Emergency Department- this form of recovery is an uphill struggle. Health systems in Italy and UK initiated rehab services and welfare calls. Of 55 visited by one post-covid institute, 50% have psychological problems, and 15% have PTSD. The screening requires multiple tests by an integrated team of specialists.

"What surprises me the most is that even the patients that have not spent any time in the ICU are extremely feeble: there is no evidence of a cardiological or pulmonary problem, but they are not even able to walk up a flight of stairs... most show a serious muscle weakness. A 52-year-old nurse had to go back to work after having recovered from Covid, but she just couldn't physically make it," Dr Piero Clavario.

Cognitive and short term memory loss are commonly noted conditions within the "post-covid" rehab units. To facilitate research on "long haulers" the UK announced a major study into the long-term health effects of Covid-19 on patients who were hospitalized- PHOSP-COVID, aims to track 10,000 people over the next 12 months or longer. "Your Covid Recovery" is the UKs online platform to support Covid sufferers.

Fatality: Critical Care SARS-CoV-2 fatality rates fell from nearly 60% at the end of March, to 42% by the end of May. The report, published in the medical journal Anaesthesia, (Great Britain) was based on an analysis of 24 studies from around the world, involving more than 10,000 patients. All studies focused on ICU deaths among adults battling COVID-19 published up to May 31. Though dropping fatality rate may be attributed to our rapid discovery of treatments, it does not indicate society can become complacent with prevention.

Eric Cioe Pena, M.D., director, Global Health, Northwell Health, New Hyde Park, N.Y.; Syed Iqbal, M.D., intensivist, Long Island Jewish Forest Hills, New York City; Anaesthesia, new s release, July 15, 2020

Ethnicity & Fatality: a CDC comprehensive analysis of demographics for 52,000 COVID-19 related deaths cited distinct racial and ethnic group differences in fatality rates based upon age. The median age of a Caucasian person was 81, Hispanics, 71, and persons claiming "Non-White, Non-Hispanic" was 72. The report states,
Additional studies are needed to elucidate associations between age, race/ethnicity, SARS-CoV-2 infection, disease severity, underlying medical conditions (especially diabetes), socioeconomic status (e.g., poverty and access to health care), behavioral factors (e.g., ability to comply with mitigation recommendations and maintain essential work responsibilities), and out-of-hospital deaths. Regional and state level efforts to examine the roles of these factors in SARS-CoV-2 transmission and COVID-19-associated deaths could lead to targeted, community-level, mortality prevention initiatives.”

The resulting guidance confirms concerns from ethnic communities, stating healthcare personnel are “encouraged to consider the possibility of disease progression in all Hispanic and nonwhite persons under 65 years and persons of any race/ethnicity, regardless of age, with underlying medical conditions, especially diabetes”.

**OBSTETRICS:** A case report via Pediatric Infectious Disease Journal discusses the occurrence of congenital infection in an LGA pre-term infant from a SARS-CoV-2 positive mother via vaginal birth.

History: COVID-19 positive mother presented primarily with gastrointestinal manifestations, diabetes mellitus, and BMI of 55. Delivering at 34 weeks' gestation after premature rupture of the membranes, the LGA infant was managed in the NICU for prematurity, glucose monitoring and SARS-CoV-2 exposure. The infant appeared initially healthy, with normal breathing and other vital signs. Julide Sisman, MD, University of Texas Southwestern Medical Center, describes in the case study that the preterm infant developed a fever and mild subcostal retractions, tachypnea and hypoxia [lowest oxygen saturation on room air of 78%] and required nasal cannula at 1L/min flow with minimal oxygen supplementation on the second day of life. “SARS-CoV-2 nasopharyngeal testing was positive at 24 and 48 hours of life. Histologic placental findings of histiocytic intervillositis and chronic villitis are not specific to SARS-CoV-2 infection, the presence of cytoplasmic staining for the SARS-CoV-2 nucleocapsid protein by immunohistochemistry and demonstration of viral particles by electron microscopy in the syncytiotrophoblastic cells strongly suggest in utero transmission.” It was determined placenta histopathology revealed SARS-CoV-2 infection by electron microscopy and immunohistochemistry. Authors hypothesize transmission to the infant occurred due to PROM “ascending infection and primary involvement of the maternal gastrointestinal tract, or by hematogenous spread if the mother was viremic during her initial infectious period.” COVID-19 tests remained positive for up to 14 days. At 21 days, the mother and infant were sent home in good condition. Further investigation into the risks of vaginal delivery and congenital SARS-CoV-2 infection are warranted. "In particular, the susceptibility to intrauterine transmission by gestational age and the relation to maternal active disease needs to be explored” Sisman, J; Jaleel, Mambarambath A.; Moreno, W; et al. Intrauterine Transmission of SARS-CoV-2 Infection in a PreTerm Infant, The Pediatric Infectious Disease Journal (2020).

**Related:** Prolonged viral shedding of SARS-CoV RNA may occur in the pregnant patient. If prevalent, this complicates the interpretation of a positive SARS-CoV-2 RT-PCR test result in the asymptomatic gravid patient. Molina, L; Chow, S Nickel, et al. Prolonged Detection of Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) RNA in an Obstetric Patient with Antibody Seroconversion, Obstetrics & Gynecology (2020)

**RESEARCH**

A meta-analysis of 674 Covid-19 clinical trials in the United States revealed 83.4% (562) were randomized multi-group studies. "Screening and trial selection adhered to the Preferred Reporting Items for Systematic Reviews and Meta-analyses (PRISMA) reporting guidelines. Only 479 included a control group deemed valid at the time of curation.” Chloroquines were the intervention (132 of 562) most frequently tested. Time to symptom and sign resolution (212 trials), mortality (180 trials), viral clearance (124 trials), and mechanical ventilation (57 trials) were evaluated. Kouzy R, Abi Jaoude J, Garcia CJ, et al. Characteristics of the Multiplicity of Randomized Clinical Trials for
Coronavirus Disease 2019 Launched During the Pandemic. *JAMA Netw Open. 2020;3(7):e2015100*

**tocilizumab**: a paper published in the *Journal of Infection*, examined the safety and efficacy in severe and critical COVID-19 patients. A retrospective analysis of 74 patients given tocolizumab treatment at a singular hospital, were subsequently compared to 148 matched controls. Patients receiving the medication were more likely to survive their illness than matched controls; however, adverse events resulted in longer hospitalization time.

A second study from *Clinical Infectious Diseases*, examined tocolizumab treatment for COVID-19 patients requiring mechanical ventilation. Authors compared 78 patients who received the drug with 76 control. A 45% decrease in patient mortality was observed in those who were treated with tocolizumab. Initial findings should encourage further research for this treatment option. Somers, E., Eschenauer, G., Troost J., et al. Tocilizumab for treatment of mechanically ventilated patients with COVID-19, *Clinical Infectious Diseases*, 11 July 2020.

- **tocilizumab in patients with severe COVID-19: a retrospective study**, *The Lancet* Treatment, whether administered intravenously or subcutaneously, might reduce the risk of invasive mechanical ventilation or death in patients with severe COVID-19 pneumonia.

**virus-neutralizing monoclonal antibodies** could be an approach to treat or prevent COVID-19 infection. Liu, L., Wang, P., Nair, M.S. et al. Potent neutralizing antibodies directed to multiple epitopes on SARS-CoV-2 spike. *Nature*(2020) discovered isolating 61 SARS-CoV-2-neutralizing monoclonal antibodies (from 5 severe COVID-19 patients) were 19 antibodies which may potently neutralized SARS-CoV-2. In vitro, 9 antibodies exhibited exquisite potency, with 50% virus-inhibitory concentrations of 0.7 to 9 ng/mL. "Epitope mapping showed this collection of 19 antibodies to be about equally divided between those directed to the receptor-binding domain (RBD) and those to the N-terminal domain (NTD), indicating that both of these regions at the top of the viral spike are immunogenic," Lui, Wang, Nair, et al. (2020).

**Non-Pharmacological Interventions**: Lin Wang, Department of Genetics, University of Cambridge, UK, among others composed an article in *Science*, July 2020, reporting demographic and social factors reduced the transmission of COVID-19. The report confirmed a reduced risk of infection resulting from intensive non-pharmaceutical interventions of isolation, social distancing, and abrupt changes in social mixing patterns because of lockdowns and confinement.

**Vaccine**: Over 155 vaccines are in development. Four have reached Phase 3. *Moderna, NEJM, published research* results of phase 1 trials for mRNA SARS-CoV-2 vaccine candidate. 45 healthy adults ages 18-55 joined a dose escalation experiment. Participants were separated to 3 groups, each receiving a different dosage of the vaccine candidate. Participants received 2 doses of the vaccine candidate 28 days apart, and were tested for resulting antibody response throughout the study period. The results showed a promising level of immune response after the second vaccine in each dosage group. The study noted several adverse outcomes amongst participants, but none of serious safety concern. There is no expert consensus on this study's results, but many acknowledge that it is a positive step toward vaccine development. According to a post on clinicaltrials.gov, Moderna has plans to start a 30,000 person phase 3 trial in 30,000 people later this month, to be completed by late October.

*It is undetermined how successful a vaccine will be due to studies showing antibodies resolving in less than 3 months after production.*

**COMPLEMENTARY / INTEGRATIVE CARE**

*Artemisia annua* was added to the University of Kentucky's (UK) innovative clinical trial for experimental COVID-19 therapies. Launched by leaders from UK's Markey
Cancer Center, College of Medicine and College of Pharmacy, the clinical trial arms will test the effectiveness of Artemisia annua extract and its derivative Artemisia artemisunate. Each treatment is selected by a multidisciplinary committee of medical experts from the University. The new trial arm is supported by ArtemiLife which grows Artemisia annua in Kentucky, to test the plants anti-carcinogen effects and determine dosing for future clinical trials. The repurposing for treatment of COVID-19 is under consideration given its excellent (and recent) safety profiles, ready availability, cost efficacy, and potential for rapid repeat study. Participants are both inpatient & outpatient high-risk candidates, have tested positive for COVID-19, or who have COVID-19 symptoms but without severity requiring intensive care. Patients with COVID-19 who choose to enroll in the trial will be randomly assigned to one of four treatment groups including Artemisia annua. The research is coordinated by the COVID-19 Unified Research Experts (CURE) Alliance team, uniting medical researchers across disciplines in the fight against SARS-CoV-2. The Alliance was launched and is supported by UK College of Medicine Dean Robert DiPaola and Vice President for Research Lisa Cassis. The team plans a larger, more traditional placebo-control clinical trial using the most promising therapy after the initial trials completion.

Global Situation Report

John Hopkins Coronavirus Interactive Map
as of July 28, 2020 at 0915 CST

CASES: 16,523,029
FATALITIES: 654,860

The World Health Organization (WHO) report on July 26 reported 15.75 million cases (200,625 new) and 640,016 deaths (7,097 new). The global daily incidence does not include data for the US- the actual global daily incidence is approximately 275,000 new cases- the third highest to date. WHO reported the 2 highest global daily incidence totals on July 24 and July 25---284,196 and 284,083 new cases, respectively.

Director-General Tedros Adhanom Ghebreyesus noted in his recent speech that response to the pandemic has fallen into four categories. Countries which quelled their COVID-19 outbreak within the first few cases being reported, those that experienced a major outbreak and contained it via strong leadership and public health measures, those that overcame an initial peak but struggled after easing social distancing, and those remaining in peak transmission. "For future outbreak control: focus on reducing mortality and reducing transmission. Empower and engaged community members to take individual behavior measures in the interest of each other, and finally, strong government leadership and with coordination of comprehensive strategies communicated clearly and consistently," Tedros.

Noteworthy Changes:

RWANDA: "Despite being classified by the World Bank as a low-income country, and despite its limited resources, Rwanda has vowed to identify every
Anyone who tests positive is immediately quarantined at a dedicated COVID-19 clinic. Any contacts of that case who are deemed at high risk are also quarantined, either at a clinic or at home, until they can be tested." *NPR, A COVID-19 Success Story*

- The number of new daily cases has risen more than 20 percent in both Europe and Canada over the past week increasing 40 percent in Australia and Japan. Hong Kong 145 cases yesterday was its highest daily total (since pandemic onset) in a **sixth day trend of over 100** new cases.
- **VIETNAM** ended a **100-day streak** without transmitted cases is evacuating 80,000 people from Danang after four tested positive.

*British Medical Journal (BMJ)* confirmed **physical distancing interventions were associated with reductions in the global transmission** of SARS-CoV-2. In a review of 149 countries, earlier implementation of lockdown was associated with a larger reduction in transmission. On average, implementation of any physical distancing intervention was associated with an overall reduction in COVID-19 incidence of 13% (IRR 0.87, 95% confidence interval 0.85 to 0.89; n=149 countries).

**United States of America**

The USA continues to lead in total daily cases and is number 5 in per capita incidence at: 4,394,772 cases and 150,551 fatalities as of 7/28/2020 at 0900 CST.

**Considerable Rises:** California, Florida, and New York are reporting more than 400,000 cases; Texas is reporting more than 375,000; and 8 additional cases are reporting more than 100,000. Florida's total number of reported coronavirus cases, 423,847 surpassing New York. US also reported more than 1,000 new deaths for 4 consecutive days, July 22-25.

**Anticipated Rises:** The **governor of Georgia** has banned local governments in the state from requiring masks to be worn. In Illinois on Saturday, the "Million Unmasked March" drew about 150 demonstrators to the capital to protest state guidance requiring face coverings in schools this fall.

**Considerable Decreases:** The national 7-day average daily incidence reached a plateau at 66-67,000 new cases per day. While promising this remains more than twice the average daily in mid-April.

**Related Resources:** Tracker for U.S. metro areas, Stat-News Tracker, Has Your State Flattened the Curve? & Restrictions across 50 States & IHME Projections

**PUBLIC HEALTH**

**Early Childhood Education** Weighing the health risks of reopening K-12 schools in fall 2020 against the educational risks of providing no in-person instruction the
National Academies recommended school districts should prioritize reopening schools full time—especially for grades K-5. School districts are divided as teachers closer to retirement protest legitimate health risks.

**Workplace Safety Rules** The State of Virginia stepped ahead of others initiating the US' first safety standards relating directly to COVID-19. The rules were outlines after labor groups protested the inaction of the federal government; OSHA has issued one citation in response to over 4,000 SARS-CoV-2 related complaints. Virginia safety and health codes board set a precedent by adopting an emergency temporary standard. The regulations requiring businesses to implement safety measures to prevent transmission in work environments. An enforceable standard, Virginia companies will face financial penalties of up to $130,000, or closure for violations.

**Universal Mask Endorsement** A commentary published in *JAMA* promotes universal masks, referencing academic papers supporting mask usage in preventing the spread of SARS-CoV-2, Universal Masking to Prevent SARS-CoV-2 Transmission-The Time Is Now (*JAMA*). Data documenting transmission of SARS-CoV-2 from pre-symptomatic and asymptomatic persons led to expanded recommendations for mask wearing in the general community. Dr. Robert Redfield, Dr. Jay Butler and Dr. John Brooks have back the new guidelines (CDC). Two new articles were also published by CDC's *Morbidity and Mortality Weekly Report*

"Factors Associated with Cloth Face Covering Use Among Adults During the COVID-19 Pandemic - U.S. 2020" & "Absence of Apparent Transmission of SARS-CoV-2 From Two Stylists After Exposure At a Hair Salon with a Universal Face Covering Policy, 2020"

**DATA INTERPRETATION** The claims that case numbers are rising because "the U.S. has increased testing" is a false interpretation of the condition in many States where testing back-logs in major cities skew data. Additionally, the interpretation of the available data is not well understood, causing continued spread of misinformation from irreparable, non-scientific, or political sources.

Professor of Epidemiology and Global Health at Boston University, Matthew Fox, and Youyang Gu, a data scientist of COVID-19 prediction models, explain how to interpret data. First, you cannot 'nitpick' the numbers. "Cases going up or down tells you a fair bit about what's going on at the moment in terms of transmission of the virus - but it's only valid if we're testing enough people," Fox said. The team advises to gain the most accuracy, examine the local number of cases, case positivity rates, and fatality rates, as a combination. A detailed view of all three indicators prevents a skewed ratio termed "undercount" and is where "case positivity rates" are useful.

![Look for positivity rates below 5% to be more confident enough testing is being done and cases are not being undercounted.](image)

**Case positivity** rates measure the percentage of positive tests from total tests completed in an area gives a more accurate perspective of a given area or within a demographic. The WHO recommendations are for an areas case positivity rate to be below 5%. Higher than this may be indicative that testing is only occurring among actively 'sick' individuals and a region is missing pre-symptomatic / asymptomatic individuals. If testing is mainly negative, it indicates a larger number of tests are being performed (likely external to hospitalized or suspected cases) and a greater portion of the population is being tested.

Any state where the positivity rate is higher than 10% is troublesome as they are likely missing infected (a) or pre-symptomatic members. Arizona and Florida have recently had very high positivity rates- above 20%- if testing has not increased
substantially then this provides an incomplete picture, whereas, if testing rates are also high, this indicates uncontrolled spread. When testing twice as many persons in a region where transmission is low, you will find far less than double the number of cases. The positivity rate should also decrease over time but between June and July, the United States average number of tests increased 41%. "The average daily positive cases nearly tripled; and the positivity rate average more than doubled from 4.4% to 8.5%." The COVID Tracking Project. "More testing" does not account for this significant difference when nationwide, hospitalizations have also surged.

The Department of Health and Human Services instructed all hospitals to report COVID-19 hospitalization data directly to HHS online after the CDC came under fire for discontinuing public access to the data. HHS gave hospitals two days to comply and tied their cooperation to the distribution of remdesivir. The new system has burdened rural health systems which had just completed the adjustments / systems to report reliably to the CDC. The new HHS Protect Public Data Hub shows the percentage of hospital reporting (compliance) within every state.

Hospital capacity data demonstrates when healthcare systems are overloaded (SURGE), staff are overworked, beds are unavailable, and fatalities increase. This should prompt stronger or renewed mitigation strategies by public health officials. All states were reporting COVID-19 hospitalization data previously, except Hawaii and Kansas; these began July 10th.

Resource: Track Your State Hospitalization Data: covidtracking.com/data

Fatality rates are an important metric, and customarily the decisive number to quantify the virus' "impact." The experience of, or anticipated experience of grief, often weighs more on the public than vague data. Monitoring fatalities provides insight to public emotional welfare and strain on healthcare personnel. In clusters of young infected people we observed a spike in cases but not in deaths (youth are low-risk mortality wise). "If they were all to transmit it to their parents or older, high-risk individuals, or if the virus started going around long-term care homes, this becomes high cause for concern," Gu. The case fatality rate would be lower if the tested persons are elders or those with comorbidities. In Florida, the median age for testing positive dropped from 60 (at the pandemic onset) to the current age of 30.

The statement "COVID-19 is less deadly now than before" is biased and directly correlating to the responses preventing our healthcare systems from becoming overburdened.

Dr. Michael Peters, an associate professor of medicine and pulmonologist at the University of California, San Francisco, "If you take the same 50-year-old man and put him in San Francisco in March versus New York in March, he would fair differently; the capacity to care for people [at that time] was limited and impaired."
Time, science, and research have improved our care of the sickest patients. Dr. Abraar Karan, an internal medicine doctor at Brigham and Women's Hospital, "The longer you wait to be infected, the less chance you have of being part of an experiment, and the more likely you will receive the outcome of a [correctly] completed experiment," he said.

These do not equate to less virulent SARS-CoV-2. Despite, the dropping case fatality rate, elderly and immunocompromised are not yet safe to mingle in crowds again.

Data Updates:
Checking in on Monday will unlikely provide full details from the weekend. In places with back-logs, data is 1-3 weeks behind. Tuesdays deliver a better outlook at the "rolling seven-day average" which averages each daily total with six days before it. Watching trends improves accuracy. While it is true in the US, the case fatality rate (number of deaths divided by the number of confirmed positive cases) is declining despite rising daily case counts, we have more testing capacity and detect more asymptomatic patients. Related: The Rise in Testing Is Not Driving the Rise in U.S. Virus Cases - The New York Times
Testing: There are four platforms to the newest government plan to expand testing:

1. The RADx-tech "aims to identify, accelerate the development of, scale up, and deploy innovative point-of-care technologies as early as the fall of 2020.

2. (RADx-rad) shorthand for radical- will focus on truly nontraditional approaches for testing that have a slightly longer horizon.

3. RADx-Advanced Technology Platforms (RADx-ATP) will support the scale-up of advanced technologies that can achieve immediate, substantial increases in capacity. The RADx-ATP program is also seeking to expand high-throughput laboratories (mega-labs) in a position to increase testing capacity to 100,000 to 250,000 tests per day. Clinical Laboratory Improvement Amendments (CLIA) regulations will be previously achieved, with labs already in operation with necessary equipment and trained staff. Guarantee of a test-turnaround time of 24 hours- from the time that the sample is obtained to the availability of the result- is proposed. Such high-throughput laboratories generally have the equipment to analyze large numbers of tests with well-developed automated workflows to process samples and obtain results rapidly. Expanding the capacity, throughput, speed of returning results, analytic performance, and regional placement of diagnostic technologies is urgently needed and, if successful, will contribute importantly to the current national efforts to curb the COVID-19 pandemic and help to reduce inequities for underserved populations.

4. RADx-Underserved Populations (RADx-UP) will establish community-engaged implementation projects to improve access to testing in underserved and vulnerable populations. It is clear that racial and ethnic minorities are bearing a higher burden of disease and mortality from Covid-19. In particular, non-Hispanic Blacks, Hispanics, and American Indians and Alaska Natives are hospitalized and die at disproportionately higher rates than other groups. This disproportionate burden in health outcomes for underserved populations and racial and ethnic minorities shines a bright light on long-standing health disparities in the United States and is of profound concern. The government seeks to identify testing platforms especially suitable for small groups or isolated, underserved populations at point-of-care sites or in rural or remote areas that do not have access to high-throughput robotic systems. Technologies that reduce the facility footprint, decrease overall testing complexity, and provide rapid results. The program is scheduled to provide deployment of these systems in the specialized environments. Ease of use, specimen-collection methods and clear instructions to facilitate widespread uptake, will be integrated into the process."
2,587 expressions of interest and over 600 full applications have been submitted from 41 States and the District of Columbia. Within 8 weeks after the launch, 27 projects had successfully made it to phase 1.

HEALTHCARE SYSTEMS
Authors suggest reform ideas in the wake of a pandemic that has left "over 20 million workers in the United States without employer sponsored health insurance" Bureau of Labor Statistics, July 2, 2020. Coverage drops, and benefit curtailments due to employer financial constraints are anticipated to add to the 31 million uninsured pre-pandemic. An article in the New England Journal of Medicine (NEJM) details the damages the new 'normal' will create. The Affordable Care Act (ACA) designed to expand Medicaid does offer open enrollment for the newly unemployed, however, 14 states elected not to expand coverage and the US government is not publicizing the subsidized federal program as an option. COVID-19 created considerable demand for extensive critical services in a prolonged time of constrained resources. The demand for space for critical patients, has brought the unexpected challenge of cancellations and revenue decrease for providers offering routine and preventive health care. Hospitals cite losses of 323.1 billion this year and subsequently healthcare employment decreased by 1 million jobs in May. "For the first time since the Great Depression, crippling financial losses threaten the viability of substantial numbers of hospitals and office practices, especially those that were already financially vulnerable, including rural and safety-net providers and primary care practices." Barnett ML, Mehrotra A, Landon BE. Covid-19 and the upcoming financial crisis in health care. NEJM Catalyst. April 29, 2020.

The healthcare "Fee-for-Services" type marketplace is not broken due to the pandemic. The existing model incentivizes price gauging and volume... "Shortages of poorly compensated services such as primary care, behavioral health, and an undersupply of services in less financially attractive poor and rural communities" are not uncommon. The difference from pre-pandemic USA, is that those unaccustomed to disparity are now being affected.

The racial and ethnic healthcare disparities are, likewise to economic and educational disparity. "The causes start with a system that disproportionately fails to insure persons of color. Lack of coverage reduces access to care, higher prevalence and less-well-controlled comorbidities, and occupational health related exposure, all predispose these communities to more severe SARS-CoV-2 illness," Blumenthal, D., Fowler, E., Abrams, M., Collins, S., Covid-19 - Implications for the Health Care System, Sounding Board, N Engl J Med 2020

Housing insecurity or poverty heightens the likelihood of treatment in underfunded, and surge capacity, facility with constrained resources. Johns Hopkins dashboard on July 16, 2020 reflected the United States (which holds 4% of the global population) was responsible for 26% of COVID-19 cases world-wide, and 24% of its COVID-19
deaths. The US does not have a "national public health information system to enable authorities to identify regional variation in the demand for, and supply of, resources critical to managing Covid-19. Without such information, authorities have no way to direct vital resources from areas of surplus to areas of undersupply. It is no exaggeration to say that the United States currently lacks a functioning national system for responding to pandemics... National trauma can change national psychology and create opportunities for major reform" Blumenthal, D., Fowler, E., Abrams, M (2020).

Healing in the future nation:
"A first step might be to have the federal government absorb the full costs of expanding Medicaid, encouraging resistant states, and extend and enhance subsidies for ACA marketplace coverage. Greater support for safety-net facilities and small community providers, including inner-city and rural hospitals and community health centers, could also improve access to basic and advanced services for populations of color. These providers also would need support to transition to value-based care" Blumenthal, D., Fowler, E., Abrams, M (2020).

Payment models that compensate prospective monthly payments (capitation) for providing all necessary care based upon the health of the group, would reward providers for actual care, disease management, patient education, and well-being versus services rendered. To prevent continued inequality, any reform should include targeting undersupplied or culturally valuable services within vulnerable and underserved areas.

Vulnerable Populations

Health Care Workers (HCW) account for a significant proportion of COVID-19 infections and may experience particularly high infection incidence after unprotected exposures. Evidence of the burden and risk factors for SARS-CoV-2 infections in Health Care Workers was summarized in a recent rapid review in the Annals of Internal Medicine. A living document, the updated version reviewed 64 studies which met inclusion criteria; 43 addressed burden of HCW infections (15 on SARS-CoV-2), and 34 studies addressed risk factors (3 on SARS-CoV-2).

Authors cite (historically) illness severity was lower in HCW than in non-HCWs, however depression, anxiety, and psychological distress were more common. The strongest evidence toward SARS-CoV-2 infection risk was PPE use (or lack of). The association was most consistent for masks but was also observed for gloves, gowns, eye protection, and handwashing; evidence suggested a dose-response relationship. No study evaluated PPE reuse. Certain exposures (intubation involvement, direct patient contact, or contact with bodily secretions) were associated with increased infection risk. Infection control training was associated with decreased risk.

Immigrants  More than 930 employees of private contractors running U.S. immigration detention centers have tested positive for the novel coronavirus, according to congressional testimony given by company executives. (Reuters)

Elders / Long Term Care
Centers for Medicare & Medicaid Services initiated resources designed to Protect Nursing Home Residents Against COVID-19 (CMS, 7/22/20)

Racial Disparities Webinar
How You Can Have a Direct Impact on Reducing The Devastating Racial Disparities of COVID-19

The numbers are stark: Black Americans represent 19% of the population but they have suffered at least 23% of COVID-19 deaths. Native Americans are also suffering much greater incidence of COVID-19 deaths.

Nurses are in the key position to positively impact these COVID-19 disparities.

A FREE, On-Demand Webinar for ALL Nurses

Register now and view this on-demand webinar immediately -- or anytime, anywhere.

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**General Resources**
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- Nurse Coaching
- Holistic Nursing Practice
- Holistic Private Practice
- Geriatric Care Center

**Holistic Resources**
- Holistic Relief Tools
- Holistic Stress Management
- Holistic Self-Care
- Holistic Mental Health
- Healing Modalities

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Check out our Resilience resources in Holistic Self-Care!

The Compassion Caravan is a national project led by holistic nurses, and hosted and facilitated by American Holistic Nurses Association (AHNA) Chapters for all of nursing, is offering Compassionate Listening Circles for nurses and healthcare providers.

The intent of these circles is to offer a Compassionate Heart-Center places for nurses and other healthcare workers to be heard, to offer connection, to be fully present for others and to embrace common humanity. Click on the "Contact" link in the www.compassioncaravan.com website to get more information and a ZOOM invite.

Rest, Work, Survive
Sleep better, work better, survive this pandemic. An online program to help rest after your shift or gear up for your coming shift. Free for all healthcare employees! Learn effective tools in short multimedia programs (average length 6 mins). Available at your convenience. Enroll for free at www.LymanCenter.com/courses

American Nurses Foundation Launches National Well-being Initiative for Nurses

In response to the growing burden of stress and moral distress on the nation's nurses as they valiantly care for patients on the front lines of the pandemic, the American Nurses Foundation announced the launch of the national Well-being Initiative designed specifically for nurses.

- COVID-19 Survey Series: Pulse on the Nation's Nurses
  - Mental Health and Wellness Survey
- Free Tools and Resources to Support the Mental Health and Resilience of All Nurses

GUIDANCE for PRACTICE

IntelyCare, a workforce management solution for post-acute facilities, launched a free COVID-19 training certification program.

Pulmonary, ARD, and Ventilator Resources, American Association Of Critical Care Nurses

Breakthrough ICU Cardiovascular Care During COVID