

Knowledge of Practice in Covid-19 Lands

Halpin AP^{1*}, Huckabay L² and Dixon K³

¹Independent Nursing Consultant, Case Manager and Community Advocate, USA

²Director School of California State University, Long Beach, USA

³Scripps Memorial Hospital, La Jolla, USA

***Corresponding Author:** Halpin AP, Independent Nursing Consultant, Case Manager and Community Advocate, USA.

Received: February 06, 2021; **Published:** March 31, 2021

Introduction

As the United States of America (USA) focuses on the Covid 19 infections amongst citizens and its impacts, the challenges have continued. The populations of Americans have now reported covid infections at the rate as 26,852,809 cases recorded by Centers for Disease [1] and 500 plus deaths due to the covid infections [1]. Additionally, American Indian tribes are participating in treatments to manage Covid episodes. As all, entities in the USA have or are receiving vaccines when available, respective to pharmacies, and agencies distributing protocols. Across populations the elderly are at high risk for demise [2,3]. Medical care has been focused on identification and treatments, yet much is still being tested. The purpose of this brief is to identify the differences and understand the needs of all groups by reporting information on specific occurrences and methods of interventions. The article is aimed to discuss Covid 19 treatments and care required by health care teams that include but are not limited to nurses and physicians.

Pandemic

A pandemic is defined as an infection or other occurring over a wide geographic area, with a higher proportion of the population [4]. COVID-19 is known as coronavirus 2019, which is a respiratory transmission disease, caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2).

This Covid virus was first identified in December 2019 in Wuhan, China, and over the past year occurring in the USA [5]. The virus symptoms most often occur within 4 - 5 days of exposure from a carrier [2,3]. Research continues to assess care interventions and population responses to treatments and are studying suggestive behaviors that may protect the virus risk. Families, individuals, and risk for acquiring the Covid-19 symptoms of illness remains with history of lung disease and risk [6]. Symptoms observed on onset include changes in smell, taste, respiratory abnormalities, and decreased energy. In literature the elderly is at risk for respiratory conditions such as pneumonia which is heightened based on the current community risk of Covid-19 [7]. According to a qualitative study by Katz using survey of 2,000 workers, found interview results encountered diverse responses on Covid-19 behaviors.

It is essential to understand the diverse USA populations at risk, and to ensure they receive timely and monitored care. Our multiple ethnic families of Americans include the American Indians and Alaska Natives (AI/AN). Each group are one of the racial and ethnic minority groups at highest risk from the disease. CDC found that in 23 selected states, the cumulative incidence of laboratory-confirmed COVID-19 cases among AI/AN was 3.5 times that of non-Hispanic whites. (<https://www.cdc.gov/2020>). And confirmed episodes of Covid at 3.5 times of non-Hispanic whites in USA [2,3]. Tribes and all USA populations are receiving CDC assistance and medical care.

United states of America centers of disease (CDC)

First precautions recommended by the Centers of Disease (CDC) in the United States of America (USA) were implemented as follows, 1) use of mask, 2) social distancing, recommendation to stay 6 feet from others, and 3) to isolate from large groups. Mask have been assessed as a precaution from respiratory droplets found 33 states required yet regression analysis results were found not to be significant yet there was a declined in by 2.9 percentage points (95% confidence interval (CI) = 0.3 - 5.5) [8]. The individual response to illness varies. It is believed masks have reduced numbers of Covid incidents per results by Joo., *et al* [8].

Another factor to consider is individual's philosophy. Philosophy as understood by psychologists is due to a human factor, which produces variance in results by individual practices in complying and implementing recommendations. Preferences are noted in research based on a "free-choice paradigm" with results based on individual choice [9]. A study by Izuma and Murayama applied a methodological paradigm using meta-analysis to indicate individual "preference" based on behavior impact on choices [9]. Their results indicated that preference changes and can exist however based on options such as "a or b" choices versus multiple choices. We as individuals assess choices based on preferences and on beliefs. Recommendations that are determined to protect us result in variances based on individuals' preferences, particularly when more choices are likely ([9], 41: 7-8). Thus, following recommendations for compliance may be different amongst groups due to preferences.

CDC is monitoring rates of Covid-19 episodes yet notes that comorbidities and age may impact the period illness episodes [1]. Governments, individual states, and the populations have been caught off guard and seek knowledge while living and moving forward to ensure safety for self and families. As individuals make decisions and voice their preferences behaviors can influence the risk. The reality of Covid-19 risk of illness and understanding individual preference is a factor to consider when rolling out COVID treatments and in order to influence behaviors.

Treatments

Industries that assist in pharmaceutical research have committed to seek vaccinations. Three USA companies have provided responses and commitment to research and testing of vaccination options. Knowledge and pharmaceutical scientist are servicing the research. Advisory Committee on Immunization Practices (ACIP) recommendations are official federal guidelines for the use of vaccines and immune globulins in the United States and are published by the Centers for Disease Control and Prevention (CDC,AICP) These agencies and authors' specialist in respiratory care note that physicians indicate hypercapnia interrupts usual gas exchange and oxygen changes and is seen with respiratory disease; when covid-19 affects lungs dead space increases with functioning of lungs compromised [10].

The three largest individual pharmacy companies currently testing vaccines in the USA are Phizer/BioNtech, Moderna, and Johnson and Johnson, each are guided by the infectious disease protocols and cellular science experts such as CDC, World Health Organization (WHO), physicians, scientists, and individuals amongst government support. The latest information indicates the companies have created and research variances in their vaccines, yet each have common factors and identify their specific differences.

Phizer/BioNTech vaccine "is the first mRNA vaccine approved for humans and has been in progress for the past two years" their previous studies and treatments of Ebola in the past has assisted in their trails. This company is noted in assisting world applications for viral vector vaccines [11]. Their efforts have been a team approach with other countries such as Oslo, Norway; Geneva, Switzerland and USA with this coalition to assist worldwide.

Moderna vaccines are noted to be developed with the National Institutes of Health based in Massachusetts. Per record at this time it is noted that this vaccine prevents Covid 19 with an efficacy at 94.1%. It does requires a second injection after 28 days [12,13]. WHO

indicates that the vaccine is not proved for use for pregnant patients and the report does not confirm its ability to prevent infection or affect transmission risk [13,14] (<http://ho.int/newsroom/feature-stories/detail/the-moderna-covid-19-mrna-1273-vaccine-what-you-need-to-know>).

Johnson and Johnson 2021 [15] is in a phase 3 study of Covid-19 vaccine indicated that their vaccine is 85 % effective and the candidates only need one shot. Efficacy was measured with a sample of 43,783 participants with symptomatic cases of Covid 19 at 468 participants. The article announced its findings based on the single vaccination over three continents indicated 3 groups of participants were from the United States, Latin America and South Africa percentages were calculated at 28 days post vaccinations (Announcement from Johnson and Johnson, New Brunswick, N.J., January 29, 2021).

Supportive medications

- According to a paper provided by pharmaceutical specialist “Remdesivir is FDA approved for treatment and was based on patient results of recovery” according to Tran, 2021’s [16] report.
- Clinical trials are reviewing results of alternative possible therapies. Various clinical trials are examining therapies as potential, one noted is monoclonal antibodies, along with existing medications are under review.
- Currently there are guideline statements on use of Tocilizumab and Interleukin -6-inhibitors, this treatment is still under observation to assess results on symptoms additionally monoclonal antibodies have shown high risk for Tuberculosis, other such as lymphopenia is often a common conditions [17,18]. Thus, medications continue to be observed for risk in the disease process of Covid-19.

Populations risk

- Current articles indicate elderly over 75 years of age and those with existing comorbidities are at highest risk for COVID (FDA, ACIP). Of the U.S. deaths involving COVID-19, from February to September 2020, 94% were associated with other comorbidities; making only 6% of deaths related to COVID-19 alone [2,3]. Poor outcomes from Covid-19 remain highest for those with developmental disorders, active cancer, and history of cardiac, kidney, lung, or diabetes disease [19]. It is no surprise that comorbidities that affect the immune system put individuals at higher risk [13,14].
- Together with respiratory symptoms, heart failure (HF) specifically is a great risk factor and is prevalent in the elderly population [19]. In the US, 6,500,000 adults are estimated to have HF [20]. Those with HF are often admitted to the hospital for care. Over one million individuals were admitted to a hospital with the principle diagnosis of HF in 2011 and the Total healthcare costs for individuals with HF are estimated to rise from 9.7 to 69.7 billion from 2012 to 2030 [21]. Those who suffer from HF now have additional risk for contracting Covid.
- Middle aged adults have contracted the disease the most [19]. These often have less comorbidities. In China, it was found that 15.1% of a middle-aged sample (age 40 - 59) with no known comorbidities developed severe illness and 3.9% of those died in the hospital [22]. Acute respiratory distress syndrome and elevated D-dimer index higher than 1 µg/ml were the most common complications related to death and may serve as predictors for severe illness [22]. For this hospitalized age group, without comorbidities, it is prudent to monitor and treat respiratory and coagulation abnormalities early [22].
- Agencies such as the advisory committee on Immunization Practices (ACIP) along with Federal Drug Agency (FDA) oversee practices, roll out of vaccinations and recommendations. Advisory Committee on Immunization Practices recommendations are official federal guidelines for the use of vaccines and immune globulins in the United States and are published by the Centers for Disease Control and Prevention (CDC, ACIP). These and specialists in respiratory care note physicians indicate that hypercapnia interrupts usual gas exchange and oxygen changes although seen with respiratory disease; when covid-19 affects lungs dead space increases with functioning of lungs compromised. American Thoracic Society as well are assisting in updates on observations, care, and findings noted by pulmonary physicians, nurses, and medical teams [23].

Health care services

Physicians, nurses, therapist, and others service health workers and contribute to care management, rehabilitation, safety, and goals to meet needs for patients and families. The USA American Lung Association along with the American Thoracic Society (ATS) provides official statements on lung diseases and management of respiratory symptoms [23]. ATS [23] has addressed the Covid pandemic with responses on respiratory management, www.thoracic.org/covid.

ATS responses include respiratory management for providers such as nurses, physicians, staff and families. ATS is committed to updates on respiratory and care management. Agencies in communities are striving to maintain behaviors for health outcomes. Nurses along with physicians' support care with orders for additional therapies, nutrition, and social services that assist patients and families in care management and coping post hospital [24-28].

Conclusion

Covid-19 has rocked the lives of most Americans, challenging our normal life, cultural behaviors, beliefs, and health. The hope is that safe protocols while protecting each of us, will assist in behavioral changes that maintain independence for families and a spirit of hope. Medical science pledges to continue to maintain diligence and pursue methods for health with a vaccine that meets efficacy standards.

Bibliography

1. Centers for Disease (CDC). "Morbidity and Mortality Weekly Report (CDC)" 70 (2021): 1-6.
2. Centers for Disease (CDC). "CDC data show disproportionate COVID-19 impact in American Indian/Alaska Native populations" (2020).
3. Centers for Disease (CDC). "Tribal Communities" (2020).
4. Meriam-Webster's Collegial Dictionary (2003): 894.
5. Hjelmggaard K. USA Today (2021).
6. Fischer A., et al. "Journal of An Official European Respiratory Society/American Thoracic Society research statement interstitial pneumonia with auto immune features". *European Respiratory Journal* 46 (2015): 976-987.
7. Fung HB and Monteagudo-Chu M. "Community Acquired Pneumonia in the Elderly". *The American Journal of Geriatric Pharmacotherapy* (2010): 47-62.
8. Joo H., et al. "Decline in COVID-19 Hospitalization Growth Rates Associated with Statewide Mask Mandates — 10 States". *Centers of Disease Morbidity and Mortality Weekly Report* 70 (2021): 1-6.
9. Izuma K and Murayama K. "Choice-induced preference change in the free-choice paradigm: a critical methodological review". *Frontiers in Psychology* 4 (2013): 41-1-12.
10. Gattinoni L., et al. "COVID-19 Does Not Lead to a "Typical" Acute Respiratory Distress Syndrome". *American Journal of Respiratory and Critical Care Medicine* 201 (2020): 10.
11. Berkley S. "Covax forecast (message)". CEO of GAVI (2020).
12. New York Times. Modern Vaccine (2021).

13. World Health Organization (WHO). "Newsletter The Moderna Covid-19, (mRNA-1273) vaccine: What you need to know" (2021).
14. World Health Organization (WHO). "COVID-19: vulnerable and high-risk groups" (2021).
15. Johnson and Johnson. Announces Single Shot Janssen Covid-19 Candida (2021).
16. Tran Jennifer. "Commonly, used treatments for Covid-19 and therapies with emergency use authorizations (EUAs)". GoodRx Research Team (2021).
17. National Institute Health (2021).
18. National Institute Health. "Treatment Guidelines Panels Statement on the use of Tocilizumab (and Other Interleukin-6 Inhibitors for treatment of COVID-19)" (2020).
19. FAIR Health White Paper in Collaboration with the West Health Institute and Makary, M. Risk factors for COVID-19 mortality among privately insured patients: A claims data analysis (2020).
20. Benjamin E J., *et al.* "Heart Disease and Stroke Statistics-2018 Update: A Report from the American Heart Association". *Circulation* 137.12 (2018): e67-e492.
21. Mozaffarian D., *et al.* "Heart Disease and Stroke Statistics-2015 Update: A Report from the American Heart Association". *Circulation* 131.4 (2015): e29-322.
22. Wang P., *et al.* "Risk factors for severe COVID-19 in middle-aged patients without comorbidities: a multicenter retrospective study". *Journal of Translational Medicine* 18 (2020): 461.
23. American Thoracic Society (ATS). "COVID-19: The ATS Response - American Thoracic Society" (2020).
24. American Journal of Respiratory Critical Care. "Research Priorities in Respiratory Nursing" 158 (1998): 2006-2015.
25. Corum J and C Zimmer. "How Moderna's Vaccine works". (2021).
26. Corso K. "Health, How long does COVID-19 vaccine protect against infection?" *Local News* (2021).
27. Katz David and Yale Griffin. "Prevention Research Center".
28. The Guardian Newspaper. "Johnson and Johnson ask FDA to approve individual vial of vaccines" (2021).

Volume 5 Issue 4 April 2021

©All rights reserved by Halpin AP, et al.