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Addiction Research

Mental Health and Substance Use Disorders in COVID-19 Pandemic

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COVID-19 has had considerable consequences in every aspects of our lives, especially in Mental Health. To keep citizens safe, lockdowns have been implemented. People are unable to work and support themselves and their loved ones. Recreational activities which maintain the populaces morale are shut down. Social distancing and travel restrictions fosters isolation. All these factors have a negative impact on mental health. Especially on the black/brown minorities of South-Central Los Angeles. COVID-19 has unmasked the health disparities which have existed in the ethnic minority population [1].

Kedren Community Health Center is one of the main testing sites in Los Angeles County. From our hospital we have tested 6,559 patients. Out of these 5,501 patients were negative and 1,058 were positive. With an alarming rate of 16.13%. This is over three times the city's positive rate of 5.1%. Four times than New York and Boston which is down to 2% [2,3]. The objective of this study is to discern why this difference exists. Based on our surveys, we anticipate having a population with high substance use disorders/dual diagnoses which is putting people at increased risk of contracting COVID-19.

We conducted a survey addressing series of concerns including, COVID-19 status, blood tests, major depression or psychiatric disorders, hypertension, diabetes, asthma, and cancer.

Hypothesis to see if people with substance use disorders living in the inner-city community predisposes them to more risk for morbidity and mortality of COVID-19.

The pulmonary system is COVID-19's primary target, is a critical reason that puts individuals with substance use disorders at increased risk. Anyone's pulmonary system that is compromised is at risk of developing COVID-19 with increased morbidity and mortality. A variety of substances can induce damage to the pulmonary system in multiple ways.

Studies have been done to show the effects of cigarette smoke has on the pulmonary system. Such as the development of bronchitis, emphysema, and lung cancer. Most substance abuse/psychiatric patients have an increased association of cigarette smoking [4]. With technology, alternative methods have become popular to bypass cigarette smoke. Younger adults are more inclined to practice 'vaping' [5]. The chemical analysis done which compares the profiles of electronic versus traditional cigarettes have shown that e-cigarettes have a reduced carcinogenic profile. Nevertheless, toxicants, carcinogens, and metal particles have been detected in liquids and aerosols of e-cigarettes [6]. Preclinical studies have shown how e-cigarette aerosols can cause inflammation and damage of lung tissue compromising its ability to respond to infection [7].

In this region there exists a methamphetamine epidemic [8]. This drug primary mode of consumption is via inhalation. The mechanism of damage to the lungs is unclear. Some studies show that free radical damage may be the underlying cause.(9) Clinically we have seen pulmonary edema, eosinophilic pneumonia, and pulmonary hypertension in methamphetamine lung injury cases [9]. Pneumonia in this populations occurs due to contaminated drug use, changes in normal bacterial flora and aspirations.

Patients of substance use disorders are more likely to have co-morbidities such as chronic obstructive pulmonary disease, cardiovascular diseases, and diabetes [10]. These are known to have worse case outcomes in COVID-19 infected patients [11].

There is a homelessness epidemic in the city of los Angeles [12]. Many patients get referred to homeless shelters. This is also a place where infection can get rapidly transmitted. Many individuals of have dual diagnoses. Such as schizophrenia, schizoaffective, bipolar disorder, bipolar with mood disorders, bipolar for psychotic features, PTSD, Borderline Personality Disorder and more.(13) Individuals who are in recovery from their respective addiction are negatively affected by social distancing measures. This can increase the chances of relapse and further worsen the problem.

Those of the younger generation who not only smoke, but also vape are also put at risk due to their nicotine addiction. Many younger individuals choose to not follow PPE guidelines which also puts them at risk for COVID-19 exposure [14].

People in the underserved communities have difficulty attaining healthcare which might lead to increased probability of contracting COVID-19. The disconnect between underserved ethnic minorities and healthcare leads to less education about the virus and preventative measures [15].

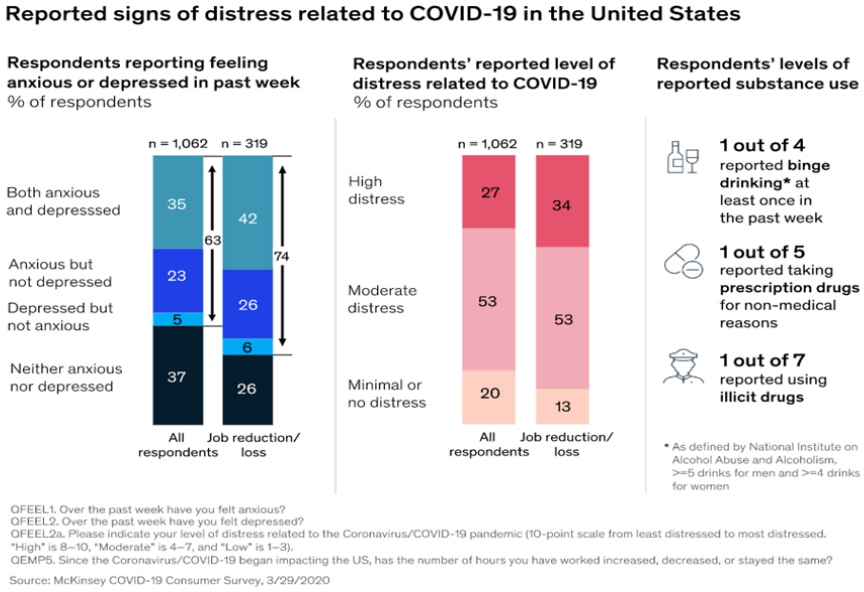
There is a high rate of cannabis use in low income neighborhoods [16]. This also damages the lungs and puts patients at increased risk for COVID-19 outcomes. People living in south central is comprised of ethnic minority populations as being the majority. These populations due to racial bias have a higher rate of incarceration which creates the risk factor respiratory transmitted diseases like COVID-19 [17]. Studies show that greater than 53.8% have Substance use disorders [18]. Due to higher rates of COVID-10 in the prison system, can lead to transmitting infection to friends and family members at home [19].

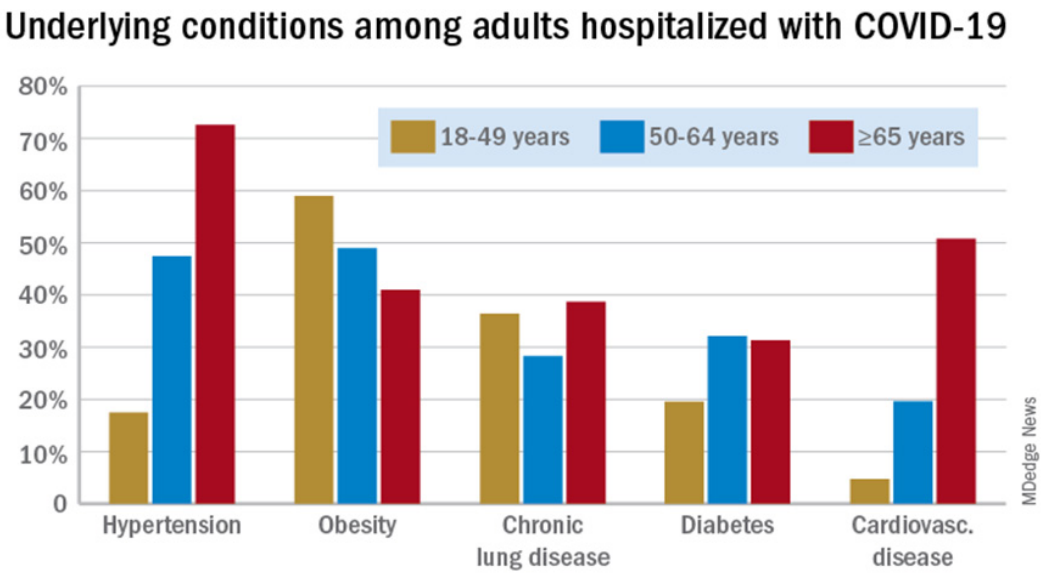
Opioid use disorder presents its own unique challenges. As it can compromise respiratory drive this can be deleterious especially if patient already has a lung disorder such as chronic obstructive disorder, asthma, lung cancer etc. Due to the environment it can prevent individuals from obtaining syringe requirements. Psychological stressors being increased can lead to more overdoses. The substance Abuse and Mental Health Services Administration has advised opioid treatment programs to provide take-home medication more flexible during pandemic [20].

Health equity evolves from the primary social determinants of health, wealth, power, resources. Those persons who have been deprived of these components are by definition is placed at risk of health inequity, notably worse health outcomes. It is not equity to provide everyone with the same resources, that would produce equality. True health equity occurs when necessary resources are provided based on a person's individual need. The COVID-19 crisis has focused a bright light on the true health inequity within our nation.

Due to the COVID-19 pandemic, our healthcare system is facing severe and unprecedented challenges. As we focus on the fear that the high risk of mortality creates in all of us, related to contracting this virus, the healthcare disparities of traditionally disenfranchised populations has become most evident. The effects that the lack of preventative health care practices have had on certain historically disadvantaged communities have been substantial. The pandemic has uncovered the stark reality of the inferior healthcare which ethnic minority communities experience routinely.

In addition, the COVID-19 crisis has made very apparent the heightened risks for multiple other at risk patient groups. Those include: minority populations (Black, Latino, American Indian, etc.) women homeless chronically psychiatrically ill (SPMI) those who live in poverty/socioeconomically disadvantaged pregnant women and children, healthcare workers/laborers these points are significant. They shine a light on the historical pattern of legislative policy, economic disenfranchisement, and lack of quality access to proper healthcare for these groups. Such has collectively led to a history of poor health outcomes for disadvantaged patient populations. The COVID- 19 crisis exposes this reality in a most significant way.





Note: Based on data from the COVID-19–Associated Hospitalization Surveillance Network for patients hospitalized in 99 counties in 14 states from March 1-30, 2020.

Source: MMWR. 2020 Apr 8:69(early release):1-7

These patient populations can have higher rates of infection, hospitalization, substance use disorders as well as more comorbid untreated illness. The COVID-19 virus has placed a spotlight on the risks of living in close proximity. Often in these types of housing arrangements, the ability to practice proper hand hygiene, clean/disinfect regularly, and wear the appropriate protective gear (PPE) is extremely poor. Thus, the very housing, work-related, and healthcare orientations in which many at risk persons live/function place them at highest risk of adverse outcomes during this crisis. This represents a very specific healthcare disparity.

The COVID-19 virus has provided an opportunity/platform to discuss and address the underlying systematic biases and overt indifference towards medical and psychiatric care for disadvantaged populations. Physicians are called to take this opportunity to work towards changing this pattern. We should work together to develop tangible actions which delineate, and endeavor to eliminate, the systemic acts of discriminatory bias (based on race, sex, gender, class, orientation, etc.) which worsen overall health outcomes. This current disaster has made the issue much more apparent for all to see. Now, we should work together to address it.

This effort on the part of our APA can be effective in implementing the very diversity and inclusion measures needed to level the playing field. Such efforts can be effective in reducing the reality of healthcare disparity in our profession. These collective goals have the potential to produce positive outcomes, not only for the disenfranchised populations, but for all in the future.

Recent data indicates that mortality rates in men are disproportionately higher due to the COVID-19 virus. This may be particularly the case in certain areas with Hispanic men. This is atypical—often during disasters, women experience a higher risk of suffering an undue burden. The current pandemic is highlighting factors of the systemic dynamics that perpetuate health disparities for many groups. Additional concerns such as the issue of stigma, fear, ignorance, intolerance, and bigotry are likely to be at the core of the discriminatory bias against others.

The discussion of legal & healthcare disparities brings to the forefront the long history of disproportionate rates of incarceration. Clearly, the notable environmental stressors, inadequate practices of monitoring/managing food preparation, and intermittent deplorable living conditions have been linked to increased rates of poor health in prison settings. This circumstance now places everyone at risk, as visitors to those environments have the potential to be exposed.

These factors play a major role in the increased risk of inmates testing positive for the COVID-19 virus. The "shelter in place" order doesn't allow for persons in the various forms of restricted living settings, to obtain optimal health care. The inability to use coping measures like exercise to manage co-occurring mental health symptoms is suggestive of increased risk. The difficult combination of minimal medical care options, living in close proximity to others with virus exposure, and limited capacity to decontaminate can exacerbate the potential for virus spread. Such has created the framework for a discussion of early release of non-violent offenders in an effort to limit the risk of failing to control more virus spread.

These concerns address several of the key components of the COVID-19 pandemic. Thus, we should outline/recommend specific tasks which if implemented can lead to proactive systemic change. First, there should be routine government-sponsored COVID-19 testing available for all.

- This is especially the case for those populations with limited healthcare access within their respective communities.
- Public education efforts should decrease stigma associated with the COVID-19 illness. There should be attention given to decreasing the use of language that ostracizes specific populations. Such offensive actions serve unfortunately to place particular groups at risk of overt discrimination.
- We should move towards effective broad-based preventative activities, and avoid prior missteps in response to a nationalized crisis. Thus, we should learn from our past and implement earlier disaster-related recommendations after prior events (e.g., Hurricane Katrina).
- We should effectively communicate to potential patient groups methods on how best to advocate for themselves. Obtaining relevant information from organizations including the WHO, CDC, AMA, APA, etc. could be particularly beneficial.
- Increasing funding support, both during this state of emergency and thereafter, should be provided to marginalized communities, in a direct effort to improve their social determinants of health.
- Bolstering the social safety net by providing more robust paid sick and family leave, as well as enhancing unemployment benefits—not as a one-time stimulus during the pandemic only but as a strategy geared to improve the social fabric of our society.
- Reducing the bureaucratic, logistical burdens/obstacles which limit the ability for many to apply for benefits. This action can often be overwhelming for those who need them most.
- Finally, while gathering public health surveillance/research data, there should be greater emphasis on the importance of obtaining the information needed to serve marginalized communities (e.g., COVID-19 rates by race, diversifying clinical trials, etc.).

The goal is to act now, in order to be in a position of effective, life-saving action for the very high risk.

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