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The Effects of Paternalistic Policies During COVID-19 on Vulnerable Populations

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INTRODUCTION: PATERNALISM, ETHICS AND DIABETES

Amidst the novel coronavirus infection (COVID-19) pandemic, the United States has enacted utilitarian public health policies to mitigate the spread of cases and related deaths. Indeed, as of the 1905 *Jacobson vs. Massachusetts* court ruling, the US government possesses the authority to enact paternalistic laws that supersede individuals' autonomy in order to protect both the individual citizens and the whole of the population from harm.¹ Other countries have enacted similar directives.

Deployed during the COVID-19 pandemic, the mandates of "Shelter in Place" have transformed everyday life, as cities shut down and the general population is homebound. In medicine, these mandates are driving clinicians to shift from patient-centered to population-centered healthcare. With this shift, clinicians reduce all "non-essential" and "non-urgent" services, both of which are ill-defined across medicine and communities, particularly in the care of chronic diseases. Furthermore, these mandates have resulted in hastily constructed and scaled telemedicine services.²

As the United States transitions to a more utilitarian healthcare system, an ethical tension between general beneficence and specific maleficence arises. More specifically, the "Shelter in Place" edicts promote the health of the greater population while putting less emphasis on the specific healthcare needs of the individual. However, we should reflect on whether our healthcare, social, and economic infrastructures can support the "Shelter in Place" mandate and the associated repercussions for individual patients, specifically those who are from medically-underserved groups and those who suffer chronic disease(s).

We will use diabetes as an example because not only may it be influenced by mental health and socioeconomic factors, but it also requires multidisciplinary management that touches upon all aspects of medicine from primary care to specialists (ophthalmology, dermatology, endocrinology, etc.). Patients with diabetes may also represent underserved populations with limited access to healthcare resources in the normal state, which may be exacerbated in the crisis state.

MENTAL HEALTH AND DIABETES

"Shelter in Place" abates transmission of COVID-19 but insists social isolation, which has the potential to break down social support systems. The subsequent weakening of social support systems facilitates depression and poor health choices such as increased smoking, alcohol use, unhealthy diets, and exercise aversion.³ Each of these can perpetuate chronic conditions like diabetes. Moreover, there is a high prevalence of diabetes co-existing with depression, which is associated with further increase in insulin resistance and poor glycemic control.⁴ In addition, increased alcohol use fosters hypoglycemic episodes and hinders self-care behaviors, such as blood glucose monitoring and therapeutic adherence.⁵ For people with pre-diabetes, diabetes, and other chronic diseases, social isolation with the associated loss of social support is not without risk and may lead to disease progression and even increase mortality.^{3,6} United States healthcare ethics has built its foundation on non-maleficence towards patients and patient autonomy in healthcare decision making, yet social isolation impedes these moral obligations and may foster long-lasting harm.

STRESS, INCOME AND DIABETES

Psychological stress also interconnects with diabetes as well as a host of other chronic diseases. High cortisol

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levels seen in chronic stress states is linked to increased insulin resistance and blood sugar levels.⁴ In the COVID-19 pandemic, one potential social stressor is unemployment. Due to the “Shelter in Place” order, commerce has slowed and the unemployment rate may upsurge to a record high of 12.8% or higher in the upcoming months.⁷ Beyond the inherent stress of losing a job, joblessness destabilizes income and health insurance. Being uninsured and low-income are strong predictors of underutilization of diabetic preventative care services and thus this population may bear increased disease burden.⁸ The low income may spur many diabetics to purchase cheaper high carbohydrate and fatty foods, which worsens glycemic control and increases diabetic comorbidities.⁹ An increase in diabetic comorbidities is related to chronic unemployment and initiates a deleterious cycle.¹⁰ Attempts to slow the COVID-19 pandemic highlight, and has the potential to exacerbate, pre-existing health disparities. As the nation limits the freedom of movement and economic stability of vulnerable populations, will our healthcare system be able to take responsibility of the added disease burden in the short term and long term?

TELEMEDICINE AND DIABETES

In this pandemic, healthcare providers may be justified to delay “nonessential” services despite the possible health decline of vulnerable populations. Although postponement of regular healthcare may exacerbate chronic or subacute conditions, telemedicine has been offered as an alternative mode of healthcare delivery to compensate. Some barriers exist in telemedicine, such as the lack of access to technology, the inability to utilize the technology, or simply the inability to scale telemedicine to provide the access that was being provided during face-to-face encounters. Despite the barriers, telemedicine is proving to be a relatively effective and efficient mode of delivering certain types of healthcare to certain types of patients. Beyond that, it provides some social interaction. For diabetes, telemedicine has shown promising results in glycemic control, but it has also shown an increased mortality compared with conventional healthcare practices in diabetic foot ulcers.^{11,12} Telemedicine does and will have a larger footprint on American healthcare for years to come, though contradicting research brings into question its effectiveness in a highly heterogeneous population. Telemedicine brings to light technological hardware and knowledge disparities throughout our population. It also brings to question the mainstreaming of newer technology in a time where health declines permeate vulnerable populations and patients require data-driven, optimal, and readily accessible healthcare.

MOVING FORWARD

In the COVID-19 pandemic, utilitarian policies prioritize the population health needs over the individual “few” who may suffer. The acute benefits may outweigh chronic detriments. But is it just that harm is borne most by those who are vulnerable with chronic diseases? Furthermore, due to these policies and the consequent decline in health of vulnerable populations, a potential increase in susceptibility to COVID-19 may result—in direct opposition to the original goals of the public healthcare policies.

Reducing these detriments requires a multipronged approach. To reach these populations, we can continue to develop new approaches for medical and psychological care that complement and augment approaches like telemedicine. We also must be prepared to address social and health consequences of the pandemic and associated policies, including unemployment, limitations in access to care, and loss of insurance that will certainly arise. Beyond the delivery and finance of medicine, we must consider public and/or private infrastructure including programs (i.e. food banks, unemployment benefits, and aid for the homeless, addiction centered support groups) that ensure robust safety nets for those who suffer the consequences of utilitarian policies during economic and health crises.

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